

Office of River Protection  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
May 19, 2011

Approval: J.A. Hedges Date: 6/21/11  
Ecology IAMIT Representative

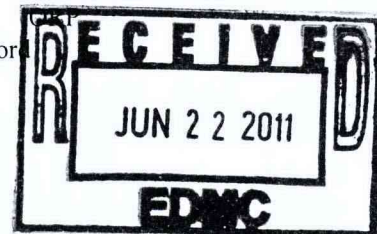
Approval: S.L. Charboneau Date: 6/22/11  
DOE IAMIT Representative

Approval: D.A. Frank Date: 6/22/11  
EPA IAMIT Representative *Pod Lobos For*

Minutes Prepared by: T.W. Noland Date: 6/22/11  
Mission Support Alliance

Abdul, W.	ORP	Lober, R.W.*	ORP
Barnes, M.W.*	Ecology	Lobos, R.A.	EPA
Bohnee, G.	NPT	Luke, J.J.*	WRPS
Bryan, C.B.*	MSA	Lynch, J.J.*	ORP
Caggiano, J.A.*	Ecology	Lyon, J.J.*	Ecology
Cameron, C.E.	EPA	McDonald, D.*	Ecology
Charboneau, S.L.*	ORP	Niles, K.	OOE
Cimon, S.*	ODE	Noland, T.W.*	MSA
Dahl, S.L.*	Ecology	Norton, J.F.*	ORP
Diediker, J.A.*	ORP	Noyes, D.L.*	ORP
Donnelly J.W.	WRPS	Olsen, G.B.	ORP
Eberlein, S.J.	WRPS	Pfaff, S.H.*	ORP
Einan, D.R.	EPA	Piippo, R.E.*	MSA
Faulk, D.A.*	EPA	Price, J.B.*	Ecology
Fletcher, T.W.	ORP	Russell, R.W.	ORP
Harris, S.	CTUIR	Skinnarland, R.R.	Ecology
Hedges, J.*	Ecology	Smith, D.M.*	ORP
Hendrickson, M.L.	Ecology	Teimouri, A.E.*	HQ
Huffman, L.A.	ORP	Trenchard, G.D.	ORP
Jim, R.	Yakama	Trent, J.S.	ORP
Johnson, J.M.*	ORP	Uziemblo, N.H.*	Ecology
Kaldor, R.A.*	MSA	Vanni, J.*	Yakama
Kemp, C.J.*	ORP	Whalen, C.L.*	Ecology
Killooy, S.E.*	WRPS	Young, J.D.	
Koll, R.J.*	ORP	Administrative Record	
Knight, D.P.*	ORP		
Knox, K.E.*	KCR		
Knutson, D.E.*	ORP		

\*Attendees



**Office of River Protection  
Tri-Party Agreement Quarterly Milestone Review  
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**TPA/CD Statistics/Status**

ORP stated that all of the milestones are on schedule, and that a few milestones were completed in the last quarter. ORP noted that there were three change packages approved associated with TPA milestone M-045-15. Tank S-102 was swapped out for tank A-103, and the due date was changed from 6/30/11 to 9/30/22. Two embedded milestones were deleted (M-045-15B and M-045-15C)

**Single-Shell Tank Corrective Action; Milestone M-45, -50, -60**

M-045-60, Submit to Ecology for Review and Approval as an Agreement Primary Document DOE's Phase 2 RFI/CMS Work Plan and Sampling and Analysis Plan (SAP) for WMA C - ORP reported that a modification to the SAP was recently approved by Ecology which dropped certain organics and sulfides and lowered the detection limits for technetium. Regarding the field investigation status since the last quarterly meeting, logging, sampling and decommissioning of the diagonal push under C-104 was completed (site J in work plan). Currently a diagonal push under C-101 in site A is in progress. Preparations are under way for adjacent diagonal push under C-101 at site B. The resistivity survey under UPR-82 is being completed and the analysis is under way. A reanalysis of the previous farm-wide resistivity investigation is being conducted, using updated analytical techniques. The results are due in July 2011.

Regarding the field work, approximately 52 percent of the 22 drilling locations have been completed, and about 59 percent of the spectral logging dry wells are finished. The resistivity work is about three-quarters completed. A Performance Assessment (PA) status was provided to Ecology and various stakeholders yesterday regarding the efforts under way and the characterization objectives

M-045-92, DOE and Ecology Will Establish Selection Criteria for Installation of Additional Interim Barriers at Additional WMAs (beyond the T-106 and TY barriers) - The SX interim barrier design review has been completed. The design covers the next two barriers. ORP received approval of the design from Ecology via e-mail, and the SX design will be submitted to Ecology prior to the June 30, 2011 milestone date.

Significant Past Accomplishments - A construction completion milestone change package was approved. The completion date was moved from June to October to take advantage of the summer schedule for construction. Nine direct push locations were finished in BY, and a resistivity analysis is under way. ORP and Ecology have agreed on the selection of U and TX Farms for additional work to assess those locations in FY12 and FY13. Ecology asked which



farms have been looked at for barriers. ORP stated that TY, TX and T Farm, BY east and west, SX and S and U have been investigated.

Issues - ORP is asserting that following conclusion of the consultation to determine the second waste management area (WMA) to be closed via M-045-84, Ecology's request for additional RFI/CMS milestones will be addressed. ORP submitted to Ecology a draft Agreement in Principle (AIP) addressing the necessary actions to facilitate closure of the second WMA. Ecology noted that ORP sent a draft agenda for the upcoming meeting regarding the next nine tanks for retrieval and closure, and Ecology will be bringing up the issue of additional RFI/CMS milestones for discussion.

#### **M-45-00 Series:**

SST Retrieval and Closure Program - ORP noted that the documents associated with milestones M-045-100, M-045-101, M-045-80 and M-045-81 were submitted to Ecology in December 2010, and ORP and Ecology are working through comments on the documents (listed on pgs 9&10 on TPA project summary report). Ecology pointed out that the word demonstration should be added to M-045-81 to read "C-200 Closure Demonstration Plan." Ecology noted that the documents are designed to assist with the process in closing C Farm. EPA requested a briefing on the closure of C Farm, and ORP took an action to set up a meeting. Ecology will attend the meeting and assist in the briefing. ORP noted that EPA is providing assistance with the RFI/CMS process by reviewing documents and attending monthly meetings. A tour of C Farm and an overview of the retrieval capabilities were provided to EPA last week.

Issues - A meeting is scheduled for May 24, 2011 to discuss the next nine tanks retrieval and closure. ORP will be seeking input only on the unsigned draft Tentative Agreement during the meeting, and there will not be any decisions made. The Tentative Agreement pertains to RCRA/CERCLA integration, and discussions will be initiated on how to proceed with the integration (bullet 3). It was noted that the Inactive Miscellaneous Underground Storage Tanks (IMUSTs) are also included in bullet 4 regarding IS-1. ORP noted that the C-106 closure plan approval NOCs (bullet 6) are associated with air permits.

Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria - ORP stated that the Performance Assessment (PA) process will continue in an effort to provide answers to the NRC's request for additional information.

C-Farm Critical Path - ORP provided an update since last month's reporting on the activities that have occurred and the impacts to C Farm's critical path schedule. The design projected finish date for C-101 retrieval has been delayed due to ventilation design subcontractor award delays. Procurement, installation, startup and operation activities were affected. Efforts to complete early installation will capture any lost time and minimize any upcoming monthly variance changes. C-102 retrieval design projected finish date has been delayed due to delays in decisions regarding which DST receiver tank to use. Decision efforts are ongoing. All other activities for C-102 were not affected.



Operation activities projected finish date for C-104 has been delayed due to attempts to loosen the remaining waste with hot water soaks. This approach would enable retrieval to get below the 360 cubic foot criteria for completion. Efforts are in place to ensure all other activities are not affected. C-105 Phase 1 design activities are not on schedule due to the delay in decisions regarding which DST receiver tank to use. Decision efforts are ongoing, and all other activities in C-105 were not affected. C-107 Phase 2 design projected finish date has been delayed due to additional time needed during the final design, review and approval. The critical system installation projected finish date is expected to occur sooner due to sequencing of final tie-ins that must be coordinated with each testing activity. Retrieval operations added an additional activity for MARS in FY12. The logic tie generated a monthly change. Next month's schedule will not reflect a change.

C-108 retrieval activity schedule reveals minimal impacts to projected finish dates due to procurement delays, and expectations are to increase efforts to reduce durations that are logically tied to C-108 activities. Efforts should decrease hard heel installation and removal activity durations. For C-109 retrieval, hard heel removal decision and procurement activities projected finish dates have been delayed due to design and engineering support activities efforts to increase resources. The increase in resources should minimize the delay in the projected finish dates. C-110 hard heel installation was deferred to FY12 due to procurement delays. As a part of the baseline change request, monthly changes will not have a negative variance change on next month's C Farm critical path schedule due to the revised path forward.

C-112 bid/award/purchase orders activities, procurement, and system installation projected finish dates have been delayed due to the completion of purchase orders for the extended reach sluicing system (ERSS), ERSS containment box, and hose-in-hose transfer lines (HIHTL). Expectations are for next month's schedule and other logically tied activities, which capture positive activity changes, should reveal positive monthly variance changes. DST receiver tank AN-106 projected finish dates have been delayed due to removal of failed equipment, installation of new equipment, and startup and readiness activities. Additional efforts to capture lost time by ensuring installation of new equipment is completed earlier will minimize upcoming monthly variance changes. All DST receiver tank 4 activities are on schedule.

Tank Retrievals with Individual Milestones - EPA asked about the reason tanks A-103 and S-112 have individual milestones. ORP explained that about ten years ago there were four demonstration retrieval technologies and four tanks with individual milestones. Since that time, retrieval of WMAs has evolved and become more efficient in moving beyond those four demonstrations, but the milestones were still carried over the years.

Double Shell Tank Closure - The milestone is on schedule and there were no issues to report.

242-A Evaporator Status - There was no discussion or any issues reported for the 242-A Evaporator.

SST Retrieval and Closure CD Milestones and TWRWP Status; D-00B Series - ORP initiated a discussion regarding tank C-104. The Consent Decree (CD) milestones require that first and/or



second and/or third limits of technology to reduce the tank waste down to 360 cubic feet have been met. Modified sluicing has been completed to the first limit of technology, and there are approximately 670 cubic feet left in the tank. ORP requested confirmation from Ecology that the first limit of technology has been reached in tank C-104, per the CD milestone. There was a brief discussion regarding the mechanism for documenting Ecology's agreement that ORP met the first limit of technology. It was agreed that ORP would schedule a briefing with Ecology on meeting the first limit of technology, which would be documented with signed meeting minutes. The minutes will be attached to the ORP Project Managers Meeting (PMM) minutes, which are submitted to the Administrative Record (AR). ORP noted that hot water soaks for dissolution in C-104 were also done, and ORP has had discussions with Ecology that it considers that as a second technology. Ecology responded that agreement has not been reached regarding the second limit of technology.

### **SST Integrity Assurance; M-45-91**

Significant Past Accomplishments - Milestone M-045-91G-TO5 was completed. A visual inspection inside 12 tanks was completed, and the report was reviewed and approved by Ecology. There were no areas of concern identified in the inspection.

Significant Planned Actions in the Next Six Months - ORP stated that there are numerous documents being submitted to Ecology for review, and the intent is to notify Ecology as soon as possible when a document will be submitted, especially if it is earlier than planned. Ecology noted that it has requested extensions for some document reviews in an effort to prioritize reviews and keep on track.

**Interim Stabilization Consent Decree** - ORP stated that Interim Stabilization Consent Decree has been terminated by the court, and this item will no longer be carried in the project summary.

### **In Tank Characterization and Summary**

Accomplishments - Ecology requested information about the sampling in catch tank 204-AR. ORP took an action to provide additional information.

Planned Action within the Next Six Months - ORP reported that the AP-105 grab samples were completed.

### **Tank Operations Contract (TOC) Overview**

ORP reported that the project is on schedule and under budget. Ecology inquired about the status of the critical path for WMA-C closure. ORP responded that it is working to provide a critical path schedule for the closure, which will include the elements for the PA, approvals to the Low-Level Waste Disposal Facility Federal Review Group (LFRG), and the Nuclear Regulatory Commission (NRC) reviews and assumptions. ORP will schedule a meeting with Ecology next week to discuss the new critical path schedule. Ecology inquired about the progress/status of the extended life for the HIHTL. ORP took an action to provide a status to Ecology. Yakama



Nation inquired about the pretreatment engineering platform. ORP explained that the platform was built by the WTP project to test their ultrafiltration systems and some other systems on a pilot scale in an effort to close out the technical issues that were identified by the External Flow Sheet Technical Review Team (EFRT). When the work was completed, the platform was moved to WRPS. The platform is considered valuable equipment and was a large investment, and it may be used in the future for integrated system testing. The cost savings associated with the platform is the estimate in the baseline to move the equipment, which is less than planned.

#### **Acquisition of New Facilities; M-90-00, M-47-00**

ORP stated that CD-0 was received for the Interim Hanford Storage Facility and secondary waste treatment, and architect/engineering contracts have been awarded. The contractors are developing the alternative analysis packages, which DOE-RL will review and conduct the down-selection process. The packages are anticipated to be received by late summer 2011, and a decision made by DOE-RL in September 2011 so the CD-1 process can start in FY12. Ecology asked if the current budget issues will affect the project. ORP responded that it is committed to both of the facilities since they are directly tied to the WTP startup, and no funding issues are anticipated.

ORP provided an overview of the budget situation. Due to the Continuing Resolution (CR) this fiscal year, 27 million dollars of work were conserved from FY11 to FY12. The budget for FY12 is uncertain, but ORP is planning to do all of the work planned in the baseline for FY12. However, there is a possibility FY12 could start under a CR, which would operate to the CR for FY11, and ORP is building different cases for the budget. One case is to the FY11 CR, one case is to just the CD, and then there is the full baseline.

#### **Supplemental Treatment/Part B Permit Applications; M-62-00, -20, -30, -45**

ORP reported that discussions with Ecology and legal staff are ongoing in an effort to reach agreement on the Agreement in Principle (AIP) associated with milestone M-062-30. ORP indicated that good progress is being made. The supplemental immobilization waste form qualification testing is ongoing at Savannah River Laboratory. There were four radioactive samples, and simulants were made for those samples. The testing is to support at least a preliminary down-select decision by June of 2012. This does not preclude the negotiations that will be conducted with Ecology on the ultimate technology selection for immobilization. ORP noted that the TPA milestones require ORP to include a second Low Activity Waste (LAW) glass facility in the negotiations with Ecology.

Ecology asked if ORP is looking at other vitrification forms, such as Kurion vitrification in the can. ORP responded that the Kurion technology readiness level is not advanced enough to consider using. However, if a second LAW facility is chosen, Kurion's technology readiness level may have improved and could be considered at that time. The four selections that are possible for supplemental immobilization are second LAW, bulk vit, steam reforming or grout.

Ecology stated that the milestone says supplemental vitrification treatment, and encouraged ORP



to continue looking at vitrification options. Ecology stated its position that it was clear during milestone negotiations that some kind of vitrification was being considered. Ecology acknowledged that there is a difference of opinion with ORP. Ecology indicated that it will look at data from other systems, but the assumption was that vitrification would be used in accordance with the milestone. Ecology stated that it was disconcerting to go back to the down-select process, and during negotiations Ecology expressed its preference to not use that process. Ecology added that it would take a lot of time and money for the down-select process, and given the budget discussions, there may not be money for that process and a second LAW would need funding. ORP responded that it is considering the down-select process because a second LAW would be very expensive, and it is exploring the possibility of an alternative to immobilizing the waste that is less expensive.

Ecology responded that there are two main issues. The first is that since 90 percent of the tank waste will remain at Hanford, posing a risk to the Columbia River, Ecology's intent is to ensure the waste is in the best possible waste form. The second issue is that the down-select process cost versus building a new facility would be about the same. ORP noted that it has considered different melters, iron phosphate glass and Kurion, and the belief is that there are no other alternatives to look at for vitrification. Ecology expressed surprise that grout was back on the list. ORP responded that grout was looked at just to determine whether there were any changes in technology, and there wasn't much of a change.

YN stated its perspective is that it reads vitrification to be vitrification, and expressed interest in iron phosphate glass for second LAW. YN is not interested in grout, bulk vit or steam reforming. ORP stated that through its legal review of the TPA milestones, the interpretation is that the milestones do not confine ORP to vitrification only in terms of how to go through the supplemental immobilization process. ORP added that the baseline is built on second LAW, and opportunities are being looked at to get the job done as quickly as possible and within the budget.

ORP stated that Ecology has been closely involved in the pretreatment alternatives analysis, and the choices have been narrowed down from five or six to two. However, there is still some uncertainty as to the throughput that may be needed for the pretreatment process. The two choices are to meet the 2020 vision needs, or to pursue a more aggressive scenario of accelerating the mission completion by several years. ORP stated that it is working with the contractor to narrow it down to one option to move forward with the conceptual design report, and at this time it is anticipated that it will be a throughput that meets the 2020 vision. The 2020 vision will require some production of LAW feed to run to the LAW building, presumably via HIHTL, so that the commissioning of the LAW building can start by the end of 2016.

Ecology requested that ORP do an analysis of the HIHTL versus hard piping. ORP responded that it would do an analysis, but noted that the hard piping costs about five times more than HIHTL. ORP added that since the duration would be on a relatively short-term basis, it made more sense to use the HIHTL. Ecology also noted the issues regarding leak detection and secondary containment should be considered when doing the analysis.

## **M-62-40, System Plan**



ORP reported that the milestones are on schedule. System plan Rev. 6 is anticipated to be completed for final review in four months. Ecology stated that ten scenarios are being vetted through a variety of assumptive conclusions and other inputs. The ten scenarios comprise five scenarios chosen by DOE-RL and five scenarios chosen by Ecology. The scenarios encompass what sequence the tanks are retrieved, how feed is supplied to WTP, and what additional facilities are needed to accelerate the processing. Ecology noted that the process with DOE-RL and the contractors has been conducted at a high level and proceeded exceptionally well.

**WTP Overall TPA and CD Summary and Milestone Status; M-62-01; M-62-49; D-00A-01, -06, -17**

**WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19**

**WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21**

**WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09**

**WTP Analytical Laboratory (LAB); D-00A-05**

**WTP Balance of Facilities (BOF); D-00A-12**

ORP reported that WTP continues moving forward with a positive cost and schedule performance, and that there are no new major technical, production or construction issues. The two major milestones due in 2011 are on schedule. The PMMs continue on a monthly basis to provide Ecology a status on the individual facilities, the vessels and vessel modifications, and permitting information for scheduling future workloads. ORP noted that design is about 80 percent complete, but design includes all the start commissioning design work, so from a design perspective the percentage is actually higher than 80 percent. WTP is on schedule for the overall completion of design and engineering work in 2013, construction complete in 2016, and final startup in 2019. ORP noted that the Federal Project Manager (FPM) for HLW is on a 90-day detail to facilitate communications and interactions at headquarters. All elements of the WTP project have been rated green, with the exception of LAW and LBL, and it is anticipated those facilities will be rated green within a couple months. A fourth FPM has been assigned to oversee shared services, which include nonfacility-specific engineering, the procurement organization, bulk materials procurement, and the logistics of the lay down yard for components and their maintenance.

ORP expressed the importance of acknowledging the progress made in the last year in turning WTP into a positive-trending project. Currently the main obstacle to a stellar performance is the issue of funding. Ecology concurred that the WTP project has improved the trend, and noted that reactions to questions are much more proactive and are at a greater level of quality in feedback. ORP commended the contractor Bechtel for its continued strong emphasis in safety performance in the field and safety for the workers.

ORP stated that an independent board led by Pacific Northwest National Lab (PNNL) and other individuals has been established to advise the WTP project. The board will provide a technical evaluation to the approach on the large scale integrated testing for vessel mixing. ORP also noted that DOE-RL chartered the EFRT, and closure of the issues identified by the EFRT (mixing and gas generation and accumulation) are being addressed through an external peer



review process.

ORP discussed the design/build approach that was adopted by DOE-RL ten years ago, where progress needed to be made while design was reaching its conclusion. The path will be drawing to conclusion in 2013, when the end states will be well-defined, and ORP believes the process has demonstrated that it's working well. When the design is completed in 2013, the licensing strategies and all of the regulatory permitting strategies will have to be locked down. The first opportunity to operate would be in 2016, when LAW and LAB have passed their Operational Readiness Review (ORR). During that three-year time period, hiring will start with the operational staff to deal with the BOF infrastructure in the 2012 time frame. It will also provide time to train and qualify workers in a far less hazardous environment off the critical path of HLW and PT and then expand the scope of the qualified work force to include HLW and PT. YN expressed concern about the feed not going through PT before going to LAW, and how the process of early startup of LAW will be explained to the public. Ecology responded that there would have to be permit modifications to allow for the operational permit conditions to come into LAW and into the bounds of the facilities; and there would be permit mods to whichever permits are needed for pretreatment to be done, either near tank or in the tanks. ORP explained that in-tank technology is being looked at to install a system within a tank where pretreatment would be done. The material that's existing in the tank would not be treated in this process.

YN brought up an issue discussed at a Hanford Advisory Board (HAB) meeting about the vessels needing a continuous flow of liquid, and if the waste is coming in batches there would be a disruption in the flow. ORP responded that quarter batch residuals are to remain in the tank, which would continually be mixed. EPA asked about the content of the LAW stream. ORP stated that the waste stream is a supernatant feed that would have less than three percent solid material. ORP noted that the supernatant will be comprised of a very complicated chemical liquid feed, and the offgas system is one of the most sophisticated systems ever built.



## Agenda

May 19, 2011

### Office of River Protection Quarterly Milestone Review Meeting

Ecology Offices, Conference Room 31

Chairperson: Stacy Charboneau

Page	Topic	Leads	Time
TPA 1 / CD 1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	8:30
TPA 7	Single-Shell Tank Corrective Action; M-45, -50, -60	Bob Lober / Jeff Lyon	8:35
TPA 9 / CD 5	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series, <ul style="list-style-type: none"> <li>- Tank in Appendix H Status</li> <li>- C-Farm Critical Path</li> <li>- Tanks with Individual Milestones</li> <li>- Double-Shell Tank Closure</li> <li>- 242-A Evaporator Status</li> </ul> SST Retrieval and Closure CD Milestones and TWRWP Status; D-00B series	Chris Kemp / Dan Knight / Jeff Lyon	8:50
TPA 19	SST Integrity Assurance; M-45-91	Jeremy Johnson/ Michelle Hendrickson	9:10
TPA 22	Interim Stabilization Consent Decree (closed, to be removed after May TPA Quarterly Meeting)	Jeremy Johnson/ Nancy Uziemblo	---
TPA 23	In Tank Characterization and Summary	Jeremy Johnson / Michael Barnes	9:15
TPA 24	Tank Operations Contract (TOC) Overview	Dan Knight / Jeff Lyon	9:20
TPA 34	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker / Jeff Lyon / Dan McDonald	9:35
TPA 35	Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45	Steve Pfaff / Jeff Lyon / Dan McDonald	9:40
TPA 37	System Plan; M-62-40	Ron Koll / Jeff Lyon / Dan McDonald	9:45
<b>BREAK</b>			
TPA 38 / CD 8	WTP Overall TPA and CD Summary and Milestones Status; M-62-01; M-62-49; D-00A-01, -06, -17	Delmar Noyes / Dan McDonald	10:00
TPA 39 / CD 10	WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19	Delmar Noyes / Dan McDonald	10:10
TPA 41 / CD 13	WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21	Delmar Noyes / Dan McDonald	10:20
TPA 42 / CD 15	WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09	Delmar Noyes / Dan McDonald	10:30
TPA 43 / CD 17	WTP Analytical Laboratory (LAB); D-00A-05		10:35
TPA 44 / CD 19	WTP Balance of Facilities (BOF); D-00A-12		10:40



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Jen Vanni	YDERWY
Jane DeOss	Ecology
Chris Keys	ORP
Dan McDonald	ECY
STEVEN CIMON	ODOE
Jeff Lyon	Ecology
STACY CHARBONNEAU	DOE
JOE CAGGIAND	ECOLOGY
Janet Diediker	DOE
Jim Knight	DOE
Dennis Faulk	EPA
ROB PIRRO	MSA
Will	DOE-WTP
Doc E. Minton	DOE-WTP
Ch Whalen	Ecology

*Tri-Party Agreement Office of River Protection Milestone Review  
May 19, 2011*

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DaBrisha Smith

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## Reed Kaldor

MSA - TPA

Kelly Bryan

## ORP - MSA

Suzanne Dahl

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	2002	2003	2004	2005	2006	2007
1. Total	100	100	100	100	100	100
2. Government	100	100	100	100	100	100
3. Private	0	0	0	0	0	0
4. Foreign	0	0	0	0	0	0
5. Domestic	0	0	0	0	0	0
6. Total	100	100	100	100	100	100
7. Government	100	100	100	100	100	100
8. Private	0	0	0	0	0	0
9. Foreign	0	0	0	0	0	0
10. Domestic	0	0	0	0	0	0
11. Total	100	100	100	100	100	100
12. Government	100	100	100	100	100	100
13. Private	0	0	0	0	0	0
14. Foreign	0	0	0	0	0	0
15. Domestic	0	0	0	0	0	0
16. Total	100	100	100	100	100	100
17. Government	100	100	100	100	100	100
18. Private	0	0	0	0	0	0
19. Foreign	0	0	0	0	0	0
20. Domestic	0	0	0	0	0	0
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24. Foreign	0	0	0	0	0	0
25. Domestic	0	0	0	0	0	0
26. Total	100	100	100	100	100	100
27. Government	100	100	100	100	100	100
28. Private	0	0	0	0	0	0
29. Foreign	0	0	0	0	0	0
30. Domestic	0	0	0	0	0	0
31. Total	100	100	100	100	100	100
32. Government	100	100	100	100	100	100
33. Private	0	0	0	0	0	0
34. Foreign	0	0	0	0	0	0
35. Domestic	0	0	0	0	0	0
36. Total	100	100	100	100	100	100
37. Government	100	100	100	100	100	100
38. Private	0	0	0	0	0	0
39. Foreign	0	0	0	0	0	0
40. Domestic	0	0	0	0	0	0
41. Total	100	100	100	100	100	100
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44. Foreign	0	0	0	0	0	0
45. Domestic	0	0	0	0	0	0
46. Total	100	100	100	100	100	100
47. Government	100	100	100	100	100	100
48. Private	0	0	0	0	0	0
49. Foreign	0	0	0	0	0	0
50. Domestic	0	0	0	0	0	0
51. Total	100	100	100	100	100	100
52. Government	100	100	100	100	100	100
53. Private	0	0	0	0	0	0
54. Foreign	0	0	0	0	0	0
55. Domestic	0	0	0	0	0	0
56. Total	100	100	100	100	100	100
57. Government	100	100	100	100	100	100
58. Private	0	0	0	0	0	0
59. Foreign	0	0	0	0	0	0
60. Domestic	0	0	0	0	0	0
61. Total	100	100	100	100	100	100
62. Government	100	100	100	100	100	100
63. Private	0	0	0	0	0	



**FINAL**

# Office of River Protection

## Tri-Party Agreement Project Summary Report May 19, 2011



Office of River Protection  
Tri-Party Agreement Milestone Review Meeting  
May 19, 2011

Page	Topic	Leads	Time
TPA 1 / CD 1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	8:30
TPA 7	Single-Shell Tank Corrective Action; M-45, -50, -60	Bob Lober / Jeff Lyon	8:35
TPA 9 / CD 5	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series, <ul style="list-style-type: none"> <li>- Tank in Appendix H Status</li> <li>- C-Farm Critical Path</li> <li>- Tanks with Individual Milestones</li> <li>- Double-Shell Tank Closure</li> <li>- 242-A Evaporator Status</li> </ul> SST Retrieval and Closure CD Milestones and TWRWP Status; D-00B series	Chris Kemp / Dan Knight / Jeff Lyon	8:50
TPA 19	SST Integrity Assurance; M-45-91	Jeremy Johnson / Michelle Hendrickson	9:10
TPA 22	Interim Stabilization Consent Decree (closed, to be removed after May TPA Quarterly Meeting)	Jeremy Johnson / Nancy Uziemblo	---
TPA 23	In Tank Characterization and Summary	Jeremy Johnson / Michael Barnes	9:15
TPA 24	Tank Operations Contract (TOC) Overview	Dan Knight / Jeff Lyon	9:20
TPA 34	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker / Jeff Lyon / Dan McDonald	9:35
TPA 35	Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45	Steve Pfaff / Jeff Lyon / Dan McDonald	9:40
TPA 37	System Plan; M-62-40	Ron Koll / Jeff Lyon / Dan McDonald	9:45
<b>BREAK</b>			
TPA 38 / CD 8	WTP Overall TPA and CD Summary and Milestones Status; M-62-01; M-62-49; D-00A-01, -06, -17	Delmar Noyes / Dan McDonald	10:00
TPA 39 / CD 10	WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19	Wahed Abdul / Dan McDonald	10:10
TPA 41 / CD 13	WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21	Jason Young / Dan McDonald	10:20
TPA 42 / CD 15	WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09	Gary Olsen / Dan McDonald	10:30
TPA 43 / CD 17	WTP Analytical Laboratory (LAB); D-00A-05		10:35
TPA 44 / CD 19	WTP Balance of Facilities (BOF); D-00A-12		10:40



### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-40A	Select a Minimum of 3 scenarios	10/31/10	10/27/10										
D-001-00-R46	Quarterly Report	10/31/10	10/28/10										
M-045-100	Submit to Ecology an Agreement Primary Document a Catch Tank "Assumed Leak" Response Plan.	12/28/10	12/28/10										
M-045-101	Submit to Ecology as an Agreement Primary Document a Report on all Catch Tanks and Pipelines Used for SST Operations	12/28/10	12/28/10										
M-045-91A	Submit an Agreement Change Package with Interim Milestones to Implement the Panel's Recommendations M-045-91	12/27/10	09/27/10										
M-045-92D	Complete Negotiations to Schedule Remaining 4 Additional Barriers	12/31/10	12/07/10										
M-045-92E	Meet Yearly on Performance of Barrier	12/31/10	12/07/10										

## Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-20	Complete All 28 Issues in Independent WTP Flowsheet & Throughput Assessment	12/31/10	08/20/10										
M-045-80	Complete those Portions of C-200 Closure Demonstration Plan Necessary to Complete Closure Plan Development for SST System	01/31/11	12/28/10										
M-062-01V	Submit Semi-Annual Project Compliance Report	01/31/11	01/27/11										
D-001-00-R47	Quarterly Report	01/31/11	01/28/11										
M-045-91G-T05	Provide Report of the Visual Inspections of 12 SSTs in Table 3.3	03/31/11	3/11/11										
M-045-92K	Barrier 1 Design/Monitoring Approval from Ecology	06/30/11		X									
M-045-15	Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project. Completion of Tank A-103 SST Waste Retrieval	06/30/11 09/30/22		X									



### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-15A	Submit a Retrieval Data Report Pursuant to Agreement Appendix I	<del>06/30/11</del> 09/30/22		X									
M-045-15B	Remaining Wastes Adequately Characterized; Risk Assessment Completed for Residuals Remaining in the Tank	06/30/11								X			
M-045-15C	Update S-102 Component Closure Activity Plan	06/30/11								X			
M-045-15D	Exception to Waste Retrieval Criteria Pursuant to Agreement Appendix H	<del>06/30/11</del> 09/30/22		X									
M-036-01A	Submit to EPA & Ecology Lifecycle, Scope, Schedule & Cost for Hanford Site (RL is DOE Lead)	07/25/11		X									
M-045-56G	Ecology and DOE Agree to Meet, at a Minimum, Yearly (by July)	07/31/11		X									
M-062-01W	Submit Semi-Annual Project Compliance Report	07/31/11		X									

### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-91C	Implement DQO Process, Test Plan to Evaluate the Chemistries	09/30/11		X									
M-045-91G-T01	Provide AOR Final Doc. For SSTs on 530,000 Gallon Tanks	09/30/11		X									
M-045-13	Interim Completion of Tank S-112 SST Waste Retrieval and Closure	TBD [In accordance with M-045-84 or -85]		X									
M-045-13E	Complete Negotiations for Interim Milestones for Closure of S-112	TBD [In accordance with M-045-84 or -85]		X									



### Fiscal Year 2012 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Aboycance	Dispute Resolution
M-062-30	Complete Negotiations Establishing Milestones for Near-Term Actions	10/25/11		X									
M-062-40B	Submit System Plan	10/31/11		X									
M-062-49	Submit Report to Ecology Demonstrating WTP Design Meets Vit. Criteria	10/31/11		X									
M-045-91B	Submit a Sampling and Analysis Plan to Ecology	12/30/11		X									
M-045-92F	Meet Yearly on Performance of Barrier	12/31/11		X									
M-045-91F-T02	Provide Report of Liner Failures for SSTs	01/31/12		X									
M-045-91G-T02	Provide AOR Final Doc. For SSTs on 750,000 Gallon Tanks	01/31/12		X									
M-045-91F-T01	Provide Report of the Liquid Leak Rate Assessments	01/31/12		X									
M-045-91D	Submit Analytical Test Plan for Cores Removed from C-107 Plug	03/31/12		X									
M-045-91G-T06	Provide Report of the Visual Inspection of 12 SSTs per criteria in M-045-91G-T05	03/31/12		X									

### Fiscal Year 2012 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-92M	Barrier 2 Design/Monitoring Approval from Ecology	06/30/12		X									
M-047-06	Complete Negotiation of No More Than 2 Interim Milestones	06/30/12		X									
M-045-91G-T03	Provide AOR Final Doc for SSTs on 1,000,000 Gallon Tanks	09/30/12		X									



## **WBS 5.2 Retrieve and Close Single Shell Tanks**

**M-045-58, Submit to Ecology for Review and Approval as an Agreement primary document, a phase 2 CMS Master Work Plan, Due: 12/31/08 Status: Complete.**

Master Work Plan is in the Primary document revision process. ORP transmitted its response to Ecology on August 18, 2010. Ecology extended review of comment responses to October 29, 2010. Ecology requested at the October PMM a two week extension from October 27, 2010. ORP acknowledged that Ecology's comment response will be considered in abeyance until DOE-ORP, Ecology, and EPA complete their negotiation of the AIP applicable to Appendix I. Ecology assumed that negotiations would be done December 24, 2010. They have been extended.

**M-045-60, Submit to Ecology for review and approval as an Agreement primary document DOE's Phase 2 RFI/CMS Work Plan and Sampling and Analysis Plan (SAP) for WMA C, Due: 12/31/08, Status: Complete.**

ORP and Ecology continue to meet monthly to identify and manage changes in the work plan. The last meeting was held April 28, 2011. Meeting minutes for the February 25 and March 24, 2011 sessions have been signed by the parties and have been entered into the TPA administrative record.

**M-045-56G, Complete Implementation of Agreed to Interim Measures, Due: 07/31/11, Status: On Schedule**

**M-045-59, Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST WMAS (pending the CMS report, milestone M-45-58, and implementation of other interim corrective measures), Due: TBD, Status: On Schedule**

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RFI/CMS Report for WMA C, Due: 12/31/14, Status: On Schedule**

**M-045-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Study Report for WMA C, Due: 06/30/2015, Status: On Schedule**

**M-045-92, DOE and Ecology will establish selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers), Due: 9/30/2016, Status: On Schedule.**

**M-045-92K, Barrier 1 Design/Monitoring Approval from Ecology, Due: 6/30/2011, Status: On Schedule.** If negotiated, complete installation of 4 additional interim barriers at a rate of one per year, with the first being completed by October 31, 2012. Prior to beginning construction and at least sixteen months before construction is to be complete, DOE will submit to Ecology a final design and monitoring plan for each interim barrier. The barrier design and monitoring plans will be consistent with those developed for WMA T and TY unless DOE and Ecology agree otherwise. Ecology will authorize construction upon approval of these submittals.

**M-045-92F, DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier,**  
Due: 12/31/2011, Status: On Schedule

**Significant Past Accomplishments:**

1. T-Farm interim barrier monitoring continues.
2. TY Interim Barrier monitoring continues.
3. Continued direct push characterization in C Farm at various planned locations. Completed angled direct push sampling campaign beneath tank C-104.
4. Continued the joint process with Ecology and other regulatory agencies and stakeholders to define the inputs, approaches, assumptions and methods that will be used for development of a performance assessment for Waste Management Area C.
5. Continued remediation technology assessments in support of a Corrective Measures Study for WMA C.
6. Completed 90% design review for a surface barrier in 241-SX farm. Ecology's comments were resolved and this design was approved via email, authorizing the bidding and construction process to begin.
7. Continued the Data Quality Objective process for the Phase 2 RFI-CMS work plan for WMA A/AX.
8. Completed reanalysis of well-to-well resistivity data from C Farm using recent advancements in codes and hardware; report in process.
9. Continued analysis of 3-D SGE data set for UPR-200-E-82 in C farm; 2-D lines were collected April 14-16.
10. Deep electrodes placed during direct push campaign in eastern BY farm have been wired to determine when they have equilibrated with the surrounding soils.

**Significant Planned Actions in the Next Six Months:**

1. Continue direct push campaign in C Farm.
2. Initiate direct push campaign in S-Farm in support of a future interim barrier.
3. Initiate 3-D SGE data collection in eastern BY farm.
4. Complete resistivity data analysis for 3-D SGE characterization of UPR-82 in C Farm.
5. Continue remediation technology assessments in support of a Corrective Measures Study for WMA C.
6. Perform additional updates to WMA C RFI/CMS workplan based on requested changes from Ecology.
7. Complete design of interim surface barriers for SX farm, and initiate construction.
8. Complete the Data Quality Objective process for the Phase 2 RFI/CMS work plan for waste management area A/AX.

**Issues:**

- ORP would like to address Ecology's request for additional RFI/CMS milestones as part of the next tank farm closure discussions underway.
  - An unsigned draft AIP was submitted by ORP to ECY on 4/18/11 to address the necessary actions to facilitate closure of the WMA to be closed after WMA C. Awaiting Ecology response and comments.



## SST Retrieval and Closure Program

**M-045-100, Submit as a primary document a Catch Tank "assumed leak response plan,** Due: 12/27/10, Status: Complete. Transmitted from ORP to ECY via letter 10-TPD-176 on 12/28/10.

**M-045-101, Submit to Ecology as a primary document a report on all catch tanks and associated pipelines in the SST System Part A,** Due: 12/27/10, Status: Complete. Transmitted from ORP to ECY via letter 10-TPD-176 on 12/28/10.

**M-045-80, Complete those portions of C-200 Closure Demonstration Plan,** Due: 1/31/2011 Status: Complete. Four primary documents transmitted from ORP to Ecology via letter 10-TPD-166 on 12/28/10.

**M-045-81, Implement & complete all remaining activities in C-200 Closure Plan and provide a report of the results of those activities,** Due: 9/30/2014, Status: On Schedule. The first deliverable specified in the closure demonstration plan was formally transmitted from ORP to ECY via letter 10-TPD-166 on 12/28/10.

**M-045-82, Submit complete permit mod requests for Tiers 1, 2, & 3 of the SST,** Due: 9/30/2015 Status: On Schedule

**M-045-84, Complete negotiations of TPA interim MS for closure of second WMA,** Due: 1/31/2017, Status: On Schedule

**M-045-83, Complete the closure of WMA C,** Due: 6/30/2019, Status: On Schedule

**M-045-85, Complete negotiations of TPA interim MS for closure of remaining WMAs,** Due: 1/31/2022, Status: On Schedule

**M-045-70, Complete waste retrieval from all remaining SSTs,** Due: 12/31/2040, Status: On Schedule

**M-045-00, Complete Closure of all Single Shell Tank Farms,** Due: 1/31/2043, Status: On Schedule

**M-045-86, Submit retrieval data report to Ecology for 19 tanks retrieved,** Due: TBD (12 months after retrieval certification), Status: On Schedule

### Significant Past Accomplishments:

- Per letter 10-TPD-166 (dated 12/28/10) for M-045-80 and M-045-81, DOE submitted:
  - Radioactive Waste Determination process Plan for waste Management Area C Tank Waste Residuals, RPP-PLAN-47325, Revision 0
  - Single-Shell Tank waste Management Area C RCRA/CERCLA Integration White Paper RPP-46459, Revision 1

- Tank Farm - Tank Removal Study, RPP-RPT-47167, Revision 0
  - Catch Tank 241-C-301 Retrieval Feasibility Study, RPP-RPT-45723, Revision 0
  - Single-Shell Tank System Waste Management Area C Pipeline Feasibility Evaluation, RPP-PLAN-47559, Revision 0
- Per letter 10-TPD-176 (dated 12/28/10) for M-045-100 and M-045-101:
  - Single-Shell Tank System Catch Tank Assumed Leak Response Plan, RPP-RPT-48438, Revision 0
  - Single-Shell Tank System Component Identification and Proposed Closure Strategy, RPP-PLAN-41977, Revision 1

**Significant Planned Activities in the Next Six Months:**

See discussions above and related discussions in Consent Decree report.

**Issues:**

- Primary Document Adequacy: Ecology has given verbal notice of a forthcoming NOV that milestone M-45-100 was not completed on schedule due to inadequacies in Single-Shell Tank System Catch Tank Assumed Leak Response Plan, RPP-RPT-48438, Revision 0.
- Primary Document Review Extensions: Ecology has extended review period for the M-45-80, -81, -100, and -101 primary documents listed above twice. The current extension, received by ORP on 4/20/11 via ECY letter 11-NWP-028, extends the review period to 5/30/10. ORP acknowledges these extensions per HFFACO Section 9.2 and awaits Ecology comments.
- Tank Farm Soil Cleanup: Unsigned draft Tentative Agreement and unsigned draft Change Packages C-11-01 (for WMA C soil to be addressed as RCRA/CERCLA Past Practice Unit) and M-45-11-02 (title changes to M-045-61 and -62 to allow CAD/ROD process) were presented to Ecology on 03/29/11. Ecology preference is to address soils through a 3116 and RCRA process.
- The Richland Office of USDOE has proposed an IS-1 alternate to the planned deliverable, as we understand the “IS-1 Common Vision” discussion on 1-18-11. IS-1 requires the delivery of an RFI/CMS that would include Tank Farm Pipelines. This should be included in the critical path as well.
- C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS is in the Winter of 2011.
- USDOE is delaying the final numeric modeling supporting the WMA C performance assessment to align the timing with completion of the Tank Closure and Waste Management EIS. Impacts of this delay are being incorporated into the critical path schedules.



## **Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria**

### **Tank 241-C-106**

#### **Significant Past Accomplishments:**

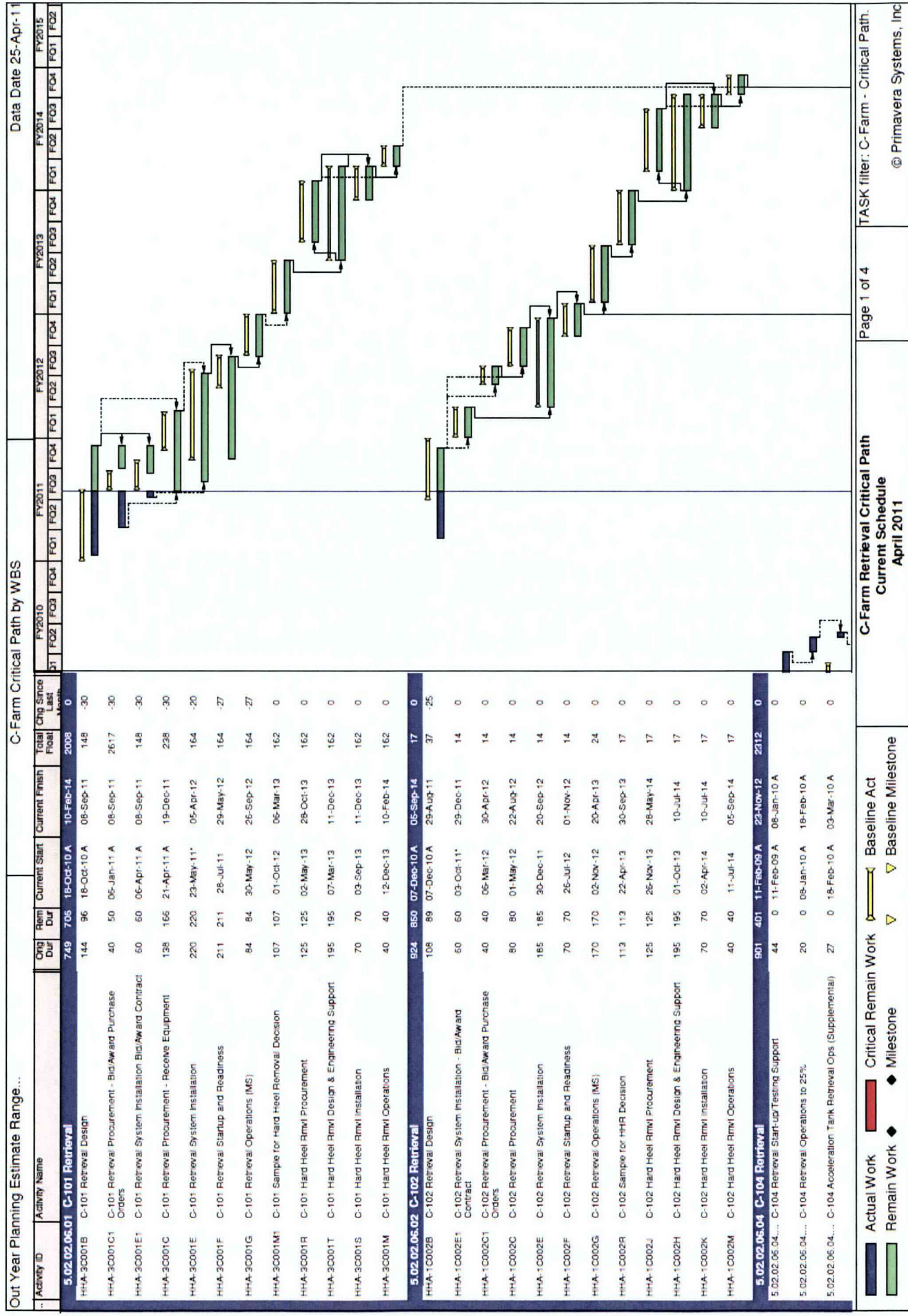
None

#### **Significant Planned Activities in the Next Six Months:**

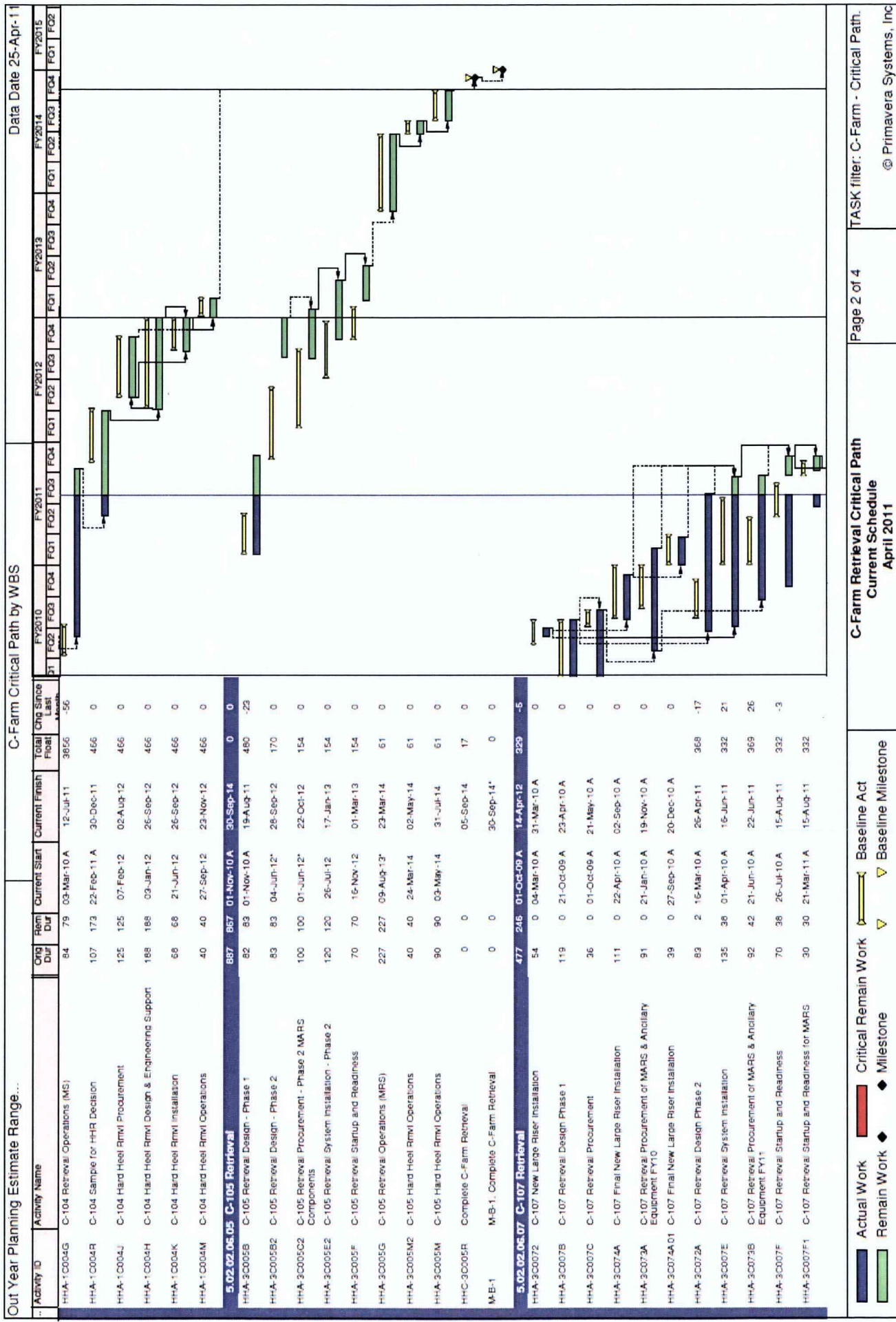
- Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A Request for Additional Information (RAI) was received from the NRC in February 2009. (It has been discussed with the NRC that much of the additional information requested is dependent upon development of C-Farm residual waste PA and, therefore, cannot be provided until the PA is published.)
- Continue WMA-C PA workshops with Ecology, EPA, NRC, and DOE HQ focused ecological risk assessment, and review of results from soil sampling.

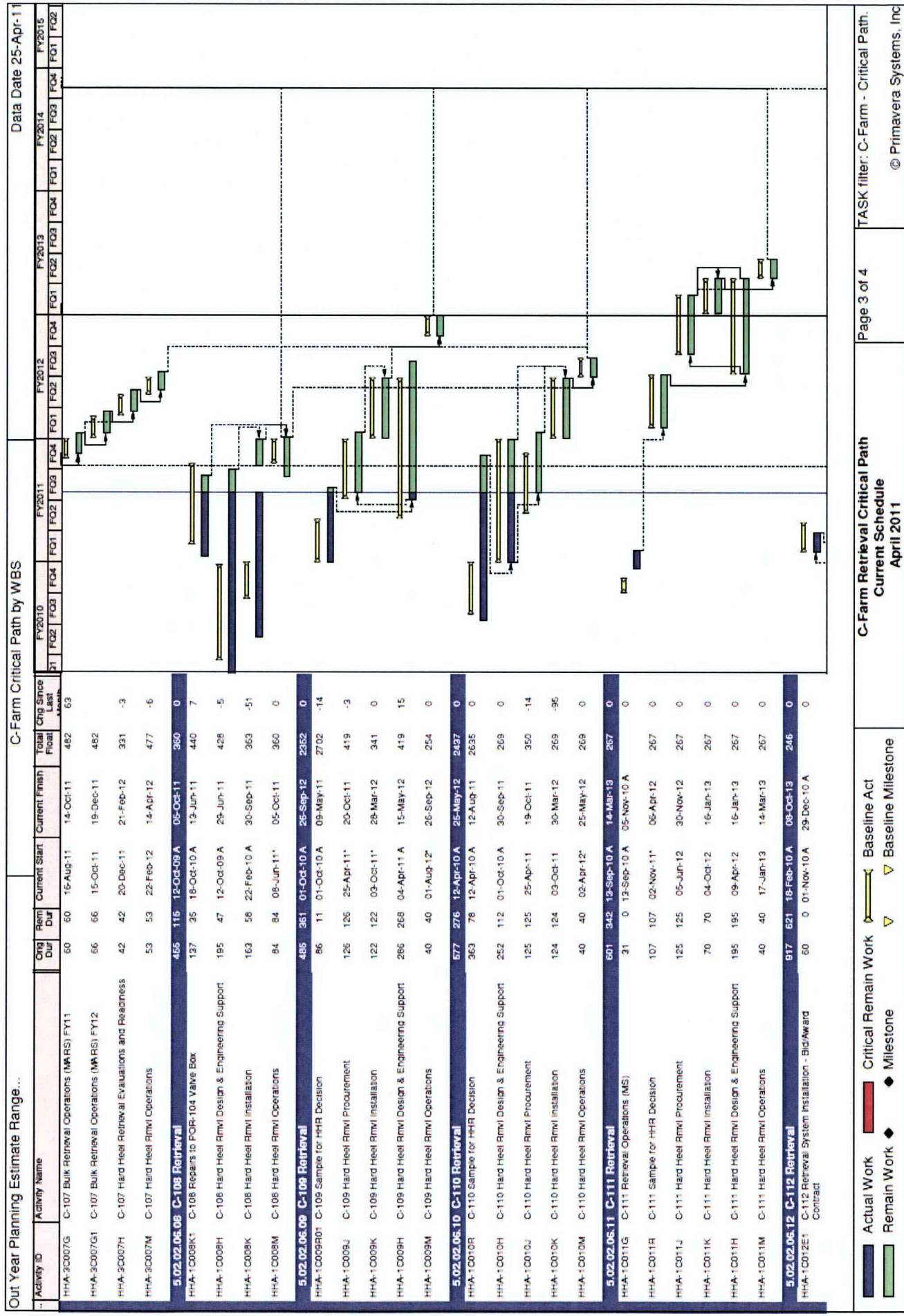
#### **Issues:**

None



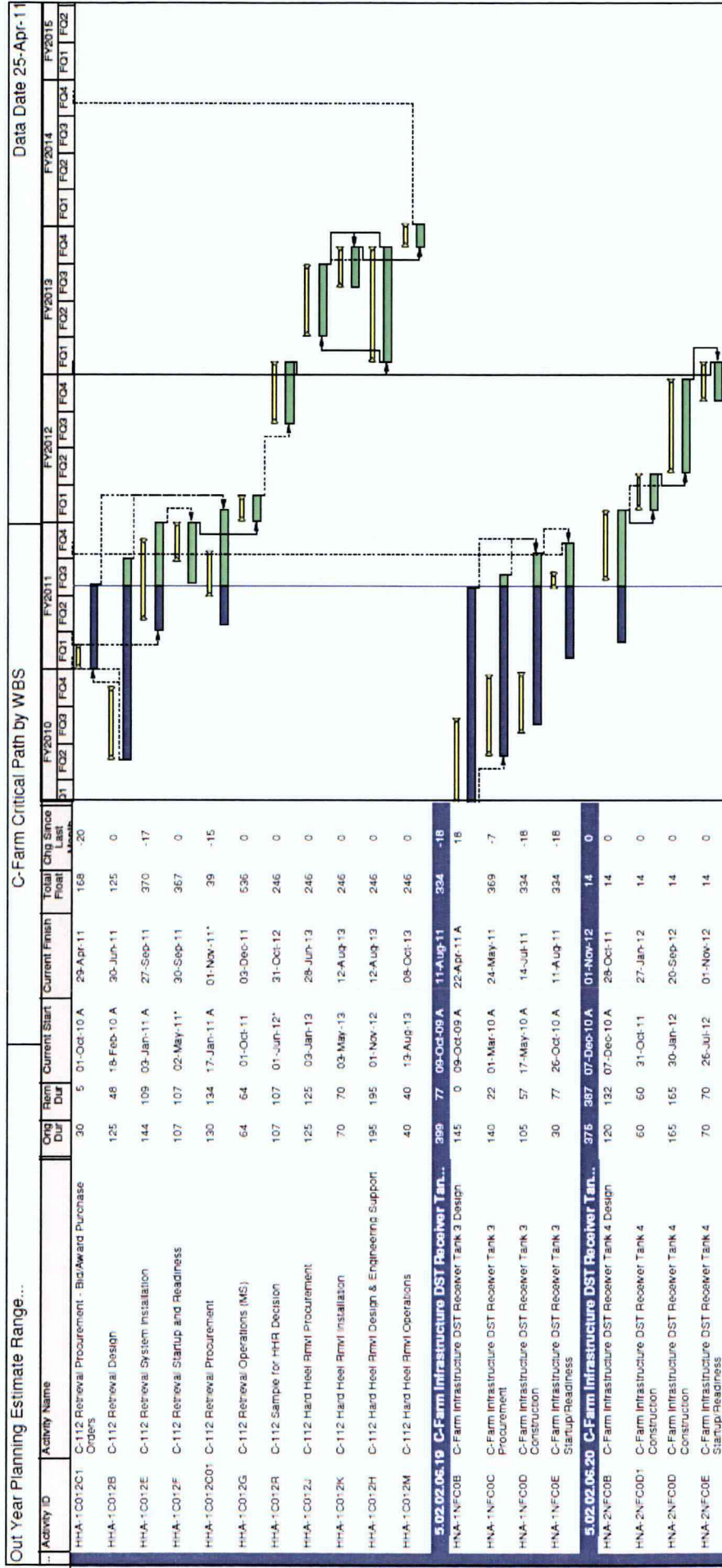








## Out Year Planning Estimate Range... C-Farm Critical Path by WBS



Actual Work Critical Remain Work Baseline Act  
 Remain Work Milestone Baseline Milestone

C-Farm Retrieval Critical Path  
 Current Schedule  
 April 2011

Page 4 of 4

TASK filter: C-Farm - Critical Path.

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## **Tank Retrievals with Individual Milestones**

### **Tank 241-A-103**

**M-045-15, Completion of Tank A-103 SST Waste Retrieval**, Due: 9/30/22 Status: On schedule. Recent change package M-45-11-04 switched tank S-102 to A-103 with a completion date of 09/30/2022 for M-045-15.

**M-045-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I**, Due: 9/30/22, Status: On schedule. Updated with A-103 tank and due date of 9/30/22 per M-45-11-04 Change Package.

**M-045-15B, Embedded Milestone, Remaining Wastes have been adequately Characterized, and a Risk Assessment has been completed for residuals that remain in the tank**, Due: 6/30/11, Status: Deleted per M-45-11-04 Change Package.

**M-045-15C, Embedded Milestone, An update to the S-102 Component Closure Activity Plan has been submitted by DOE**, Due: 6/30/11, Status: Deleted per M-45-11-04 Change Package.

**M-045-15D, Embedded Milestone, if appropriate, DOE will request an exception to waste retrieval criteria pursuant to Agreement Appendix H**, Due: 9/30/22, Status: On Schedule. Updated with A-103 tank and due date of 9/30/22 per M-45-11-04 Change Package.

### **Significant Past Accomplishments:**

- Change Package M-45-11-04 was signed by ORP and Ecology on 04/19/11.

### **Significant Planned Activities in the Next Six Months:**

None

### **Issues:**

None



**Tank 241-S-112**

**M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**, Due: TBD (in accordance with M-045-84 or M-045-85), Status: On Schedule

**M-045-13E, Complete Negotiations for Interim Milestones for Closure of S-112**, Due: TBD  
Status: On Schedule as part of M-045-84 and M-045-85.

**Significant Past Accomplishments:**

- Ecology letter of January 7, 2008, concurred with ORP that retrieval of Tank S-112 is complete.

**Significant Planned Activities in the Next Six Months:**

None

**Issues:**

None

**Complete Closure of Double Shell Tanks**

**M-042-00A, Complete closure of all double shell tank farms**, Due: TBD, based upon completion of retrieval under M-62-45 plus 5 yrs but no later than 9/30/2052 Status: On Schedule

**Significant Past Accomplishments:**

None

**Significant Planned Actions in the Next Six Months:**

None

**Issues:**

None

## 242-A Evaporator Status (previously reported under Milestone M-48, which has been closed out)

### 242-A Campaign strategy:

One (1) cold run (utilizing water only) and two (2) waste processing campaigns were completed in FY2010. No additional campaigns are anticipated in CY2011 due to ongoing 242-A and Tank Farm Life Extension and ARRA funded facility upgrades. The 242-A Campaign Strategy for FY2010 through FY2015 depicted below has been updated based on ORP-11242, River Protection Project Plan, Revision 5, and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY10	10-01	AW-106	AW-106	Campaigns 10-01/10-02 were performed back-to back starting in late August and completing in early October 2010. Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
FY10	10-02	AW-106	AW-106	
FY11	NA	NA	NA	No campaign planned in FY11 due to ongoing 242-A and Tank Farm facility life extension and ARRA funded upgrades.
FY12	12-01	AP-107 AZ-102	AP-104 AP-107	Estimated start June 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY12	12-02	AP-107 AZ-102	AP-107	Estimated start August 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY13	13-01	AW-106	AP-107	Estimated start March 2013. Two (2) passes required.
FY13	13-02	AZ-101 AN-101 AW-106	AP-107	Estimated start September 2013. Two (2) passes required.
FY14	14-01	AN-106 AZ-102 AW-106	AP-107	Estimated start March 2014. Two (2) passes required.
FY15	15-01	AY-101 AZ-102	AP-107	Estimated start March 2015. Three (3) passes required.
FY15	15-02	AY-101	AP-107	Estimated start August 2015. Four (4) passes required.



## **SST Integrity Assurance**

**M-045-91G-T05, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria listed in Table 3.3 in RPP-PLAN-46847, Rev.0, Due: 3/31/2011, Status: Complete 03/11/11 (Letter 11-TF-039). Ecology completed review and sent an approval letter stating ORP had met this milestone on 5/12/2011.**

**M-045-91C, implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0, Due: 9/30/2011, Status: On Schedule**

**M-045-91G-T01, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 530, 000 gallon tanks (B, BX, C, T and U Farms), Due: 9/30/2011, Status: On Schedule**

**M-045-91B, Submit a Sampling and Analysis Plan to Ecology for the sampling of sidewall cores from tank 241-A-106 or alternate tank approved by Ecology, Due: 12/30/2011, Status: On Schedule**

**M-045-91F-T01, Provide to Ecology as a HFFACO secondary document a report evaluating the applicability to Hanford SSTs of the liquid leak rate assessments of sludge and salt-cake from the Savannah River Site, Due: 1/31/2012, Status: On Schedule**

**M-045-91F-T02, Provide to Ecology as a HFFACO secondary document a report evaluating the common factors of liner failures for SSTs that have leaked and will provide recommendations as appropriate, such as enhanced Leak Detection, Monitoring, and Mitigation, Due: 1/31/2012, Status: On Schedule**

**M-045-91G-T02, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 750,000 gallon tanks (BY, S, TX and TY Farms), Due: 1/31/2012, Status: On Schedule**

**M-045-91D, Submit to Ecology an analytical test plan for the cores removed from the C-107 plug, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T06, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria in M-045-91G-T05, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T03, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 1,000,000 gallon tanks (A, AX and SX Farms), Due: 9/30/2012, Status: On Schedule**

**M-045-91D-T01, Provide Ecology a report containing the results and interpretation of testing, and analysis performed on the concrete dome samples obtained from the Tank C-107 plug, Due: 5/31/2013, Status: On Schedule**

**M-045-91F-T03, Provide to Ecology, as a HFFACO secondary document a report assessing the feasibility of testing for ionic conductivity between the inside and outside of SSTs, Due: 5/31/2013, Status: On Schedule**

**M-045-91F-T04, provide to Ecology, as a HFFACO secondary document, a report on the 100-series single-shell tanks which have been or will be identified as having leaked in RPP-32681, Rev 0, Due: 7/31/2013, Status: On Schedule.** Ecology and ORP are jointly drafting a Class III Change Request, M-45-11-05, aligning the completion dates of this milestone and M-045-91F-T02 ("Common Factors of Liner Failures for SSTs" report) to ensure all of this milestone's leak evaluations will be available for use in the Common Factors report.

**M-045-91E, Provide to Ecology a compilation of the Single-Shell Tank farms dome deflection surveys every two years, beginning 9/30/2013, Due: 9/30/2013, Status: On Schedule**

**M-045-91G-T04, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 55,000 gallon tanks (B, C, T and U Farms), Due: 10/31/2013, Status: On Schedule**

**M-045-91F, Provide to Ecology a report (Summary Conclusions Report on Leak Integrity) summarizing and evaluating the information submitted under M-045-91F-T01 through -T04, Due: 12/31/2013, Status: On Schedule**

**M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record (AOR) for SSTs, Due: 4/30/2014, Status: On Schedule**

**M-045-91B-T01, Provide Ecology a report containing the results and interpretation of testing. and analysis, performed on the concrete core obtained from Tank A- 106 or alternate tank, Due: 9/30/2014, Status: On Schedule**

**M-045-91H, Submit a change package (if deemed necessary by DOE and Ecology) to establish additional milestones based on information obtained from the actions in the preceding M-045-91 series milestones to date, Due: 7/31/2015, Status: On Schedule**

**M-045-91I, Provide to Ecology an IQRPE certification of SSTs structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify, Due: 9/30/2018, Status: On Schedule**

#### **Significant Past Accomplishments:**

- M-045-91G-T05: Complete 03/11/11 (Letter 11-TF-039) Approved by Ecology 5/12/2011
- M-045-91B: Draft DQO report sent to Ecology 04/20/11. Comment resolution meeting held May 5/9/2011. All comments satisfactorily resolved.
- M-045-91D: Draft Analytical Test Plan for Tank C-107 dome core analyses were submitted to Ecology 5/5/2011. Ecology provided comments 5/11/2011 and authorized core samples to be shipped to the lab. Due: 03/31/2012.



- M-045-91C: Implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0. A DQO meeting was held 4/27/2011. Due: 9/30/2011.

**Significant Planned Actions in the Next Six Months:**

- M-045-91B: Finalized DQO and SAP is planned to be submitted to Ecology 07/2011 (approximately 5 months in advance). Due 12/30/11.
- Complete milestone M-045-91C, implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0, Due: 9/30/2011. The DQO is being drafted for Ecology review and comment.
- Complete milestone M-045-91F-T03, plan to provide Ecology, Ionic Conductivity Feasibility Report in July. Due: 5/31/2013.
- M-045-91F-T04: Leak assessments are ongoing with meetings every other week through 2012.
- Complete milestone M-045-91G-T01, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 530, 000 gallon tanks (B, BX, C, T and U Farms), planned submittal to Ecology in July. Due: 9/30/2011.
- Complete milestone M-045-91G-T02, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 750, 000 gallon tanks (BY, S, TX, and TY Farms), planned submittal to Ecology in October. Due: 1/31/2012.

**Issues:**

None

## **Interim Stabilization Consent Decree**

### **I. Near-Term Deliverables:**

#### **D-001-00, Complete Interim Stabilization of all 29 SSTs**

Due: 09/30/04

Status: Completed on March 31, 2004, with discontinuation of pumping in U-108 and subsequent consultation with Ecology staff. Interim stabilization of S-102 and S-112 is held in abeyance by third amendment to the Consent Decree. ORP's obligation to interim stabilize S-112 was satisfied upon completion of retrieval operations. Retrieval of S-102 has been impacted by the spill at this tank. A review of the January 25, 2010, video of the tank has shown approximately 2,400 gallons of supernatant liquid remaining. This is below the criteria for interim stabilization of less than 5000 gallons supernatant liquid.

On October 21, 2010, ORP received a letter from Ecology notifying ORP of Ecology's decision to require ORP to Interim Stabilize tank 241-S-102 within 18 months of receipt of its notification. ORP transmitted the required documentation to Ecology to demonstrate that tank 241-S-102 meets the requirements for interim stabilization, as set forth in Case Number CT-99-5076, Third Amendment on December 9, 2010 via letter 10-TPD-163.

On March 8, 2011, the Interim Stabilization Consent Decree was terminated.

### **II. Significant Accomplishments:**

- Termination papers signed by court on 03/08/2011. This closes out the D-001-00 milestone series.

### **III. Significant Planned Actions in the Next 6 Months:**

- None

### **IV. Issues**

- None



## In Tank Characterization and Summary

For the period from April 1 – April 30, 2011:

### Accomplishments:

- Complete tank 241-C-109 off riser sampling on April 18, 2011.
- Completed Revision 18 of the DQO HNF-SD-WM-DQO-001, *Data Quality Objectives for Tank Farms Waste Compatibility Program*, on April 12, 2011.
- Completed Revision 12 of the DQO, RPP-8532, *Double-Shell Tanks Chemistry Control Data Quality Objectives*, on April 25, 2011.
- Completed Revision 0 of the TSAP RPP-PLAN-43865, *Sampling and Analysis Plan for Liquid and Solids in the 204-AR-TK-1 Catch Tank* on April 14, 2011.
- Completed the *ULD Calculation Spreadsheet v. 1.0 – FY11 Q2 BBI Update SVF-2213.xlsm* on April 26, 2011.
- Completed revision 2 of RPP-RPT-43493, *Derivation of Best-Basis Inventory for Tank 241-AP-106 as of April 1, 2011* for the FY11 quarter 3 BBI update on April 27, 2011.

### Planned Action within the next Six Months:

- Tank Sampling
  - Tank 241-AP-105 corrosion mitigation grab samples scheduled for May 2011.
  - Tank 241-AY-101 corrosion mitigation grab samples scheduled for May 2011.
  - Tank 241-C-104 off riser sampling scheduled for August 2011.
  - Tank 241-AW-106 evaporator samples scheduled for August 2011.
  - Tank 204-AR-TK-1 compatibility samples scheduled for July 2011
  - Tank 241-C-108 hard heel dissolution samples scheduled for August 2011.
  - Tank 241-AN-106 corrosion mitigation samples scheduled for October 2011.
- BBI Updates
  - Nine tank updates are planned for FY11 Quarter 3.
    - One tank is complete and the information sent to BBI users.
  - Four other tanks have been started.
- Data Quality Objectives (DQO)
  - Complete revision 0 of the 244-CR Vault tanks in May 2011.
  - Complete revision 3 of the PCB Management DQO in July 2011.
  - Complete revision 0 of the SST Corrosion Test DQO in June 2011.

### Issues:

None

## TANK OPERATIONS CONTRACT (TOC) OVERVIEW

### Project Performance

The earned value analysis is a comparison of cost and schedule contract-to-date performance. The earned value performance reporting reflects the format, Work Breakdown Structure (WBS) reporting levels, and variance thresholds as agreed to with the Tank Farms Operations Contractor (TOC) for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing Tri-Party Agreement Milestones.

WRPS Project Performance - (\$k)										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	50,219.3	44,202.5	45,098.7	(6,016.8)	(896.2)	0.88	0.98			
FYTD	226,155.1	219,969.4	224,205.1	(6,185.7)	(4,235.7)	0.97	0.98	487,816.0	478,874.2	8,941.8
CTD	986,210.8	973,203.1	916,328.1	(13,007.7)	(56,875.0)	0.99	1.06	2,117,867.2	2,053,784.4	64,082.8
Red shaded cells indicates a SPI/CPI less than .90; Green shaded cells indicate a SPI/CPI between .90 and .99; and Blue shaded indicates a SPI/CPI greater than or equal to 1.										

The SV and CV analysis thresholds at the reporting levels are as follows:

#### 5.01.01 - BASE OPERATIONS

##### March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	208,604.0	204,998.0	210,560.5	(3,606.0)	(2%)	(5,562.6)	(3%)	0.98	0.97	430,628.1

### Schedule Variance and Cost Variance Analysis

The unfavorable CTD SV (\$3,606k) is reportable:

Description/Cause: due to

- *RA-Sampling Operations, (\$1,420k)*: fabrication delays following ongoing design review and approval, which causes the construction subcontractor to wait for resolution of potential design changes.
- *DST Integrity Project, (\$1,079k)*: delayed encasement pressure checks in the AZ-01A pit due to the resolution of a problem evaluation request (PER) on lock and tag requirements and crane positioning issues, in addition to the failed jumper in the AZ-01A pit during a leak detection test that prevented crews from entering the pit to perform the encasement pressure checks.

These variances are offset by a favorable SV in *RA-Filter Replacement/Removal*, \$585k: due to completion of the Radial Filter Replacement project eight months ahead of schedule.

The unfavorable CTD CV (\$5,563k) is reportable:

Description/Cause: due to

- *DST TSR/Basic Maintenance, (\$9,806k)*: more resources required to repair failed equipment because more equipment failed than expected; field and project work has not required the level of support expected; and additional farms being maintained than planned.



- *RA-Management & Oversight*, (\$3,033k): more seat time required for qualification and certification training than planned and additional utilization of Request for Offsite Services (ROS) support for reporting.

These variances are offset by favorable CVs in *SST Safe Storage & Operations*, \$5,583k: continuous labor and subcontractor underruns because work did not materialize as planned.

#### 5.01.04 - TANK FARM UPGRADES

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	78,198.7	77,913.6	66,912.0	(285.2)	(0%)	11,001.6	14%	1.00	1.16	141,972.5

#### Schedule and Cost Variance Analysis

The favorable CTD CV of \$11,002k is reportable:

Description/Cause: due to

- *RA-Remove Obsolete Equipment*, \$2,523k: fewer hours required to prepare the engineering documents to support the Demolish AN and AW Exhausters projects; use of lower rate engineering resources to prepare the engineering documentation for the Remove DST Obsolete Equipment project.
- *RA-DST Valve Assembly Upgrades*, \$1,757k: efficiencies and reduced pricing negotiated with the supply chain on the firm fixed-price contract for the fabrication of the jumpers for the AP, AN-A, and AN-B valve pits and condensed activities for the funnel replacements have resulted in savings on valve procurement and project support resources.

#### 5.01.05 - PROJECT SUPPORT

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	284,091.6	283,912.5	265,368.5	(179.1)	(0%)	18,544.0	7%	1.00	1.07	560,902.8

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$18,544k is reportable:

Description/Cause: due to

- *Liquidations*, \$5,950k: the FY09 and FY10 rate true-up to the higher than planned rates.
- *Finance Support*, \$2,588k: Continuity of Service over liquidations in FY09; P-card volume credit; and material and labor underruns due to unfilled staff positions.

These variances are offset by an unfavorable CV in *RA-Finance Support*, (\$5,503k): FY09 and FY10 rate adjustments based on estimated incurred cost rates.

#### 5.02.01 - RETRIEVAL/CLOSURE PROGRAM

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	87,260.4	86,924.5	76,606.3	(335.9)	(0%)	10,318.3	12%	1.00	1.13	164,728.3

**Schedule Variance and Cost Variance Analysis**

*The favorable CTD CV of \$10,318k is reportable:*

Description/Cause: due to

- *Hose in Hose Transfer Line Disposition (SST)*, \$4,446k: efficiencies realized in engineering and the field by grouping multiple hoses together to work in parallel, and several HIHTLs were less contaminated than anticipated, therefore not requiring flushing or high radiation controls; and waste boxes were shipped directly to the disposal facility without using a subcontractor.
- *Catch Tank & Pipeline Reporting*, \$1,773k: efficiencies gained by using direct labor rather than contract support for the initial planning scope, preparing the report using an existing database, and the use of in-house rather than subcontract personnel for finalization and comment resolution of the report. Work scope complete.
- *Interim Barrier*, \$1,357k: efficiencies realized as part of the SGE activities by using multiple depth electrodes for data collection.

**5.02.02 - SST RETRIEVAL EAST AREA**

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	96,247.3	91,797.7	97,869.5	(4,449.5)	(5%)	(6,071.8)	(7%)	0.95	0.94	215,339.0

**Schedule Variance and Cost Variance Analysis**

*The unfavorable CTD SV of (\$4,450k) is reportable:*

Description/Cause: due to

- *C-107 Retrieval*, (\$1,744k): delays in completing the MARS resulting from additional system improvements and the related turnover documentation.
- *C-108 Retrieval*, (\$1,232k): engineering and plant forces resources directed to higher priorities, delaying fabrication of key equipment; modifications, repairs, and inspections are needed to existing equipment prior to installation of new equipment; and plant forces fieldwork supervisor continually reassigned to other work.
- *C-Farm Infrastructure DST Receiver Tank 3*, (\$1,216k): the change in designation of DST #3 receiver tank from AY-101 to AN-106 in order to utilize existing infrastructure from the C Farm in the AN Farm, and additional delays in procurement of the jumper assemblies, slurry distributor, and pump assembly.

*The unfavorable CTD CV of (\$6,072k) is reportable:*

Description/Cause: due to

- *C-104 Retrieval*, (\$9,228k): increased planning and preparatory work required for completion of 04-AZ jumper removal, pump removal/disposal, sluicer installation; additional cost associated with the installation and modifications to the Articulated Mast System (AMS); and increased cost in replacing the slurry pump.
- *C-107 Retrieval*, (\$4,618k): the MARS procurement costing more than estimated and higher subcontractor cost due to additional time to complete the MARS.

These variances are offset by favorable CVs in

- *C-110 Retrieval*, \$2,169k: due to efficiencies captured during C-110 waste retrieval operations because of the amount of slurry being greater than the model predicted.



- *C-Farm Infrastructure DST Receiver Tank 3*, \$1,999k: efficiencies realized from changing the designation of the receiver tank from AY-101 to AN-106, which avoids duplicating efforts in the AY Farm including resources, materials, and equipment.

### 5.03.01 - WTP FEED DELIVERY PROGRAM

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	43,465.6	42,888.5	35,099.6	(577.1)	(1%)	7,789.0	18%	0.99	1.22	\$8,993.9

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$7,789k is reportable:

Description/Cause: due to

- *WFD PE/Flow Sheet*, \$2,075k: lack of contract support until scope was established and delays in hiring staff. Additional saving is due to less request for baseline flow sheets than originally planned and staff working on System Plan Rev. 6.
- *WFD Technical Baseline*, \$1,520k: technical task being completed with fewer engineering hours than expected.
- *RA-WFD Tank Mixing & Sampling*, \$961k: the transfer of \$1,037k to SRNL for the bench-scale demonstration.

### 5.03.02 - CONSTRUCT DST SYSTEMS

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	12,620.2	12,225.5	10,685.3	(394.7)	(3%)	1,540.2	13%	0.97	1.14	93,735.2

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$1,540k is reportable:

Description/Cause: due to

- *DST Feed Delivery Project Management*, \$533k: FY09 staff vacancies and efficiencies with developing the DST Upgrade strategic management plan resulting from highly qualified staff.
- *RA- DST Feed Delivery Environmental/Permitting*, \$350k: a duplication of resources budgeted in FY10.
- *RA- Waste Feed EPCC [Engineering, Procurement, Construction, and Commissioning] - Strategic Plan*, \$332k: a duplication of resources budgeted in FY10.

### 5.03.03- RA- TRANSFER SYSTEM MOD PROJECT

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	15,092.5	15,075.1	12,012.0	(17.4)	(0%)	3,063.1	20%	1.00	1.26	20,581.3

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$3,063k is reportable:

Description/Cause: due to

- *RA-SY Transfer Line Upgrades*, \$805k: efficiencies from consolidating fieldwork, which reduced duration and resources.

#### 5.03.06 - IMMOBILIZATION PROGRAM

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	7,586.7	7,580.7	5,613.9	(6.0)	(0%)	1,966.8	26%	1.00	1.35	31,344.4

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$1,967k is reportable:

Description/Cause: due to

- *Hanford IHLW Storage Project Support*, \$604k: labor efficiencies realized by using prior knowledge, limiting the need for additional engineering support.
- *Interim Hanford Storage Facility Project Mgmt*, \$573k: labor efficiencies realized by using prior knowledge, limiting the need for additional engineering support. Additional savings realized from not ramping up the Integrated Project Team due to a delay in receiving CD-0.

#### 5.03.07 - WTP OPERATIONAL READINESS

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	7,622.4	7,618.7	6,430.8	(3.6)	(0%)	1,188.0	16%	1.00	1.18	16,111.0

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$1,188k is reportable:

Description/Cause: due to

- *WTP Interface Management*, \$359k: delayed hiring project staff in the first quarter due to utilization of highly trained individuals with applicable experience.
- *WTP Pretreatment Engineering Platform*, \$312k: work was submitted with available information at a significant savings.
- *WTP Operations Readiness Plan*, \$178k: less labor than planned. Work scope complete.
- *WTP Transition*, \$177k: delayed hiring project staff.

#### 5.03.09 - TANK WASTE PRETREATMENT PROJECT

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	6,690.6	6,383.9	3,622.4	(306.7)	(5%)	2,761.5	43%	0.95	1.76	6,863.0

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$2,762k is reportable:

Description/Cause: due to



- *TDD-RMF/SCIX/FNSR Technology/Evaluations*, \$2,253k: the de-obligating of WRPS funds to direct fund both SNNL and ATL/222-S Laboratory in support of FBSR sample analysis and product testing.
- *Lithium/Bayer Pretreatment Program*, \$366k: under run from the delayed receipt and cancellation of technology development and demonstration funds. Work scope complete.

#### 5.03.10 - SECONDARY WASTE TREATMENT/EFT

March 2011 (\$k)

	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	9,399.0	9,413.6	7,440.9	14.7	0%	1,972.7	21%	1.00	1.27	34,920.4

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$1,973k is reportable:

Description/Cause: due to

- *RA-Secondary Waste Form Testing*, \$1,044k: efficiencies associated with Ceramicrete® and FBSR test plan development, lower costs for purchasing chemicals for testing, and labor efficiencies in laboratory testing of samples.
- *Secondary Waste Treatment/EFT Project Mgmt*, \$524k: fewer resources charging than planned.

#### 5.04.01 - SUPPLEMENTAL TREATMENT

March 2011 (\$k)

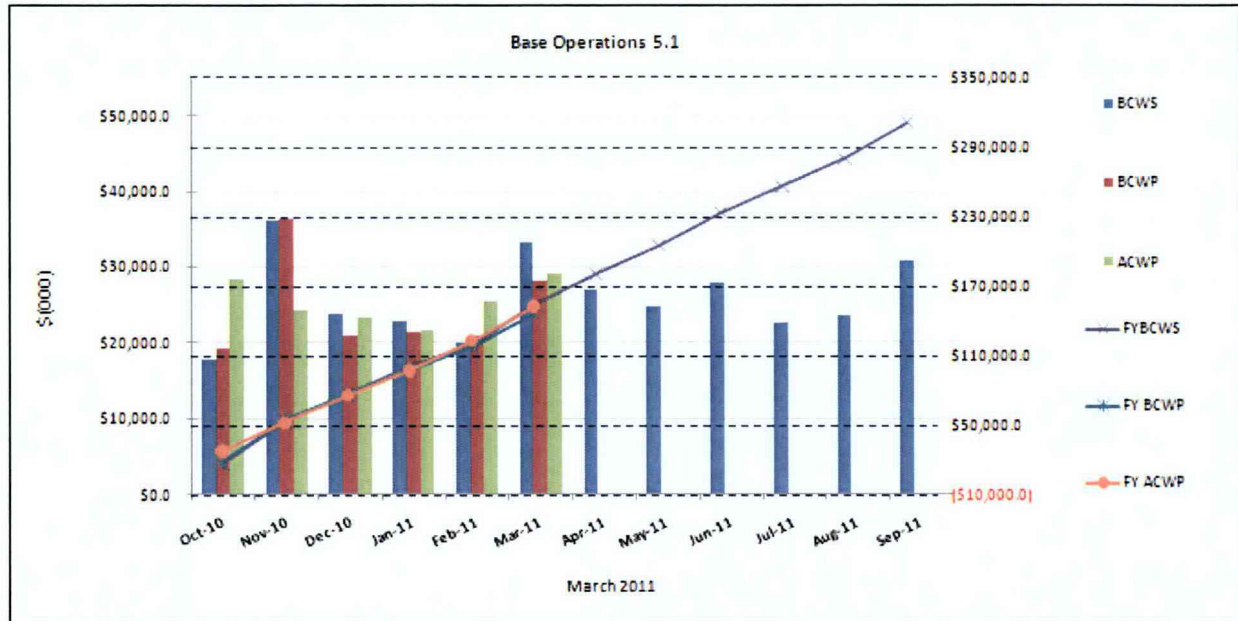
	BCWS	BCWP	ACWP	SV	SV%	CV	CV%	SPI	CPI	BAC
CTD	7,587.7	7,067.4	6,241.3	(520.3)	(7%)	826.1	12%	0.93	1.13	23,780.5

#### Schedule Variance and Cost Variance Analysis

The favorable CTD CV of \$826k is reportable:

Description/Cause: due to

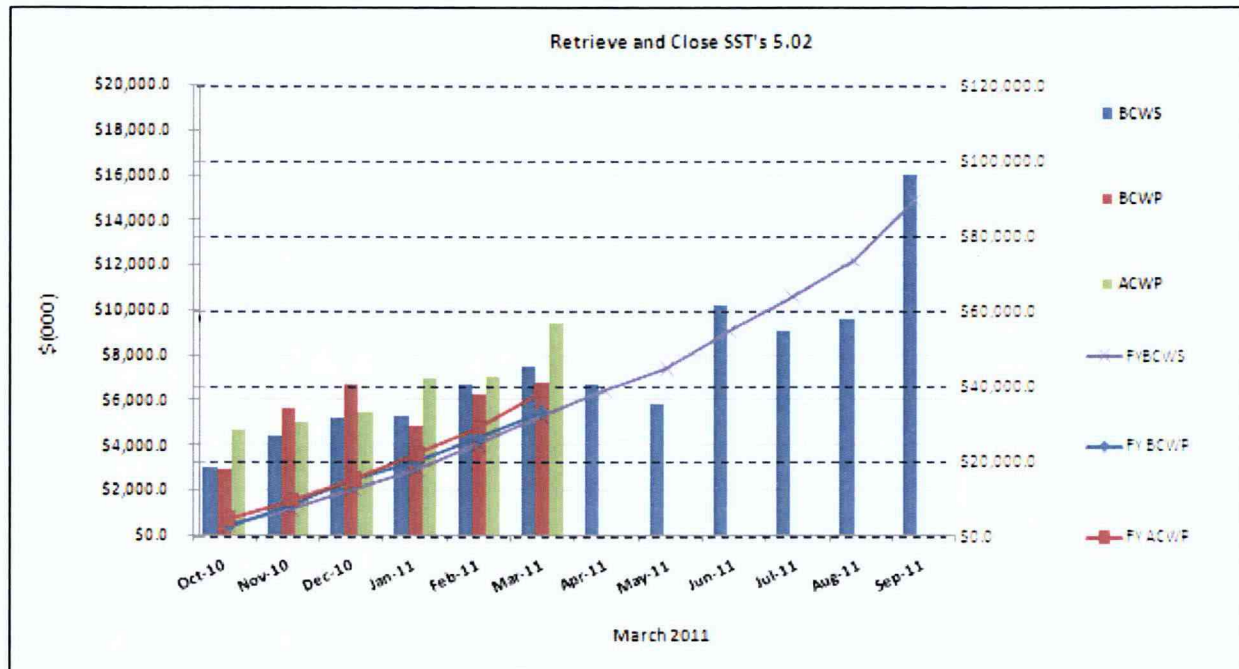
- *Treatment Project Support*, \$190k: lower utilization of resources.
- *Immobilization Project Support*, \$124k: lower utilization of resources and one open engineering position.



Earned Value Month	BCWS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACVP	FY SPI	FY CPI
Oct-10	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68
Nov-10	\$36,143.1	\$36,366.3	\$24,452.2	1.01	1.49	\$53,920.3	\$55,651.4	\$53,001.8	1.03	1.05
Dec-10	\$23,775.6	\$20,995.7	\$23,448.8	0.88	0.90	\$77,695.9	\$76,647.1	\$76,450.6	0.99	1.00
Jan-11	\$22,876.6	\$21,370.0	\$21,705.1	0.93	0.98	\$100,572.5	\$98,017.1	\$98,155.7	0.97	1.00
Feb-11	\$20,031.0	\$21,023.0	\$25,607.6	1.05	0.82	\$120,603.5	\$119,040.1	\$123,763.3	0.99	0.96
Mar-11	\$33,329.2	\$28,292.6	\$29,059.6	0.85	0.97	\$153,932.7	\$147,332.7	\$152,822.9	0.96	0.96
Apr-11	\$26,989.3					\$180,922.0				
May-11	\$24,825.5					\$205,747.5				
Jun-11	\$28,050.3					\$233,797.8				
Jul-11	\$22,688.4					\$256,486.2				
Aug-11	\$23,719.6					\$280,205.8				
Sep-11	\$30,894.2					\$311,100.0				

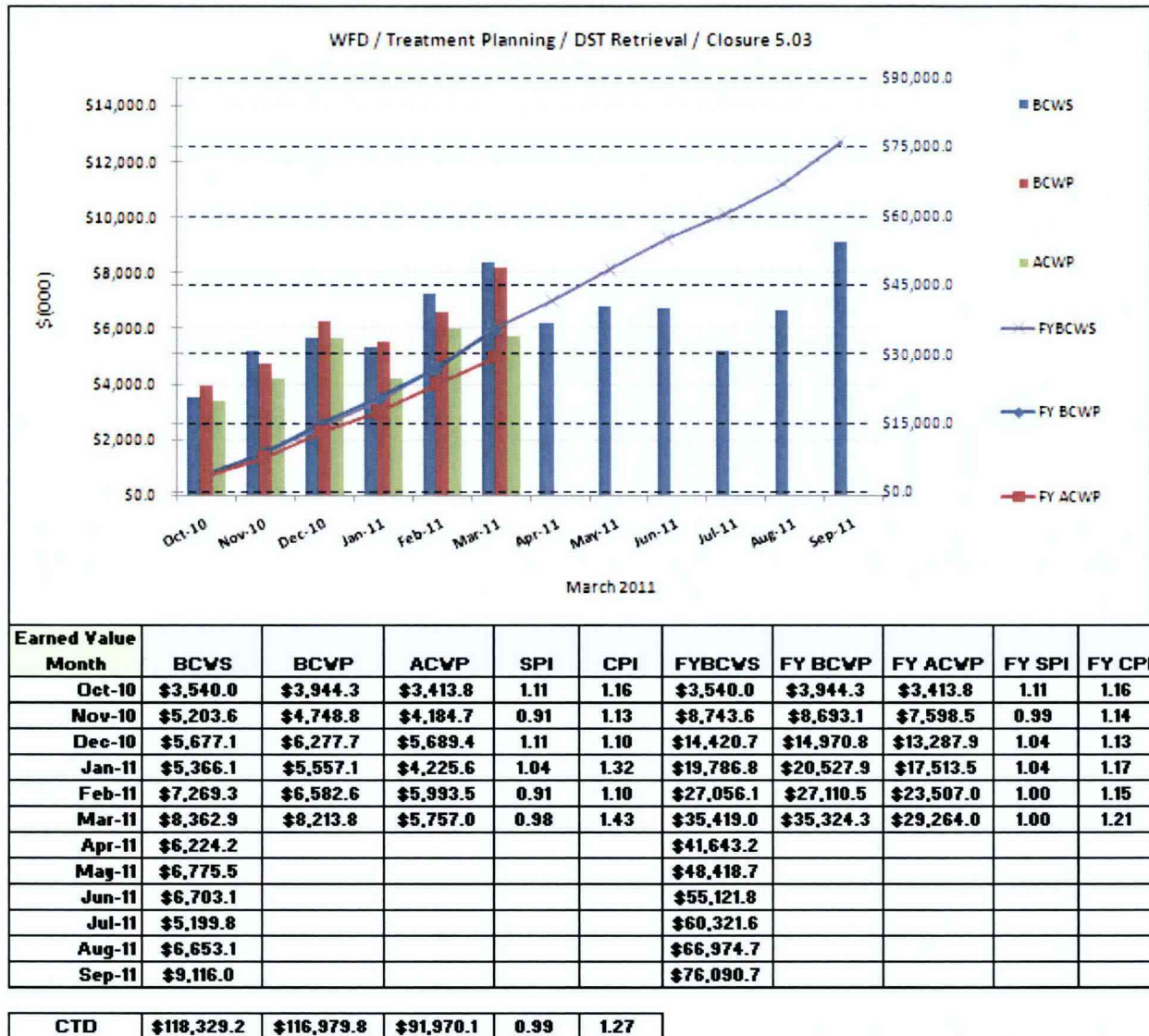
CTD	\$666,916.6	\$661,666.0	\$636,949.4	0.99	1.04
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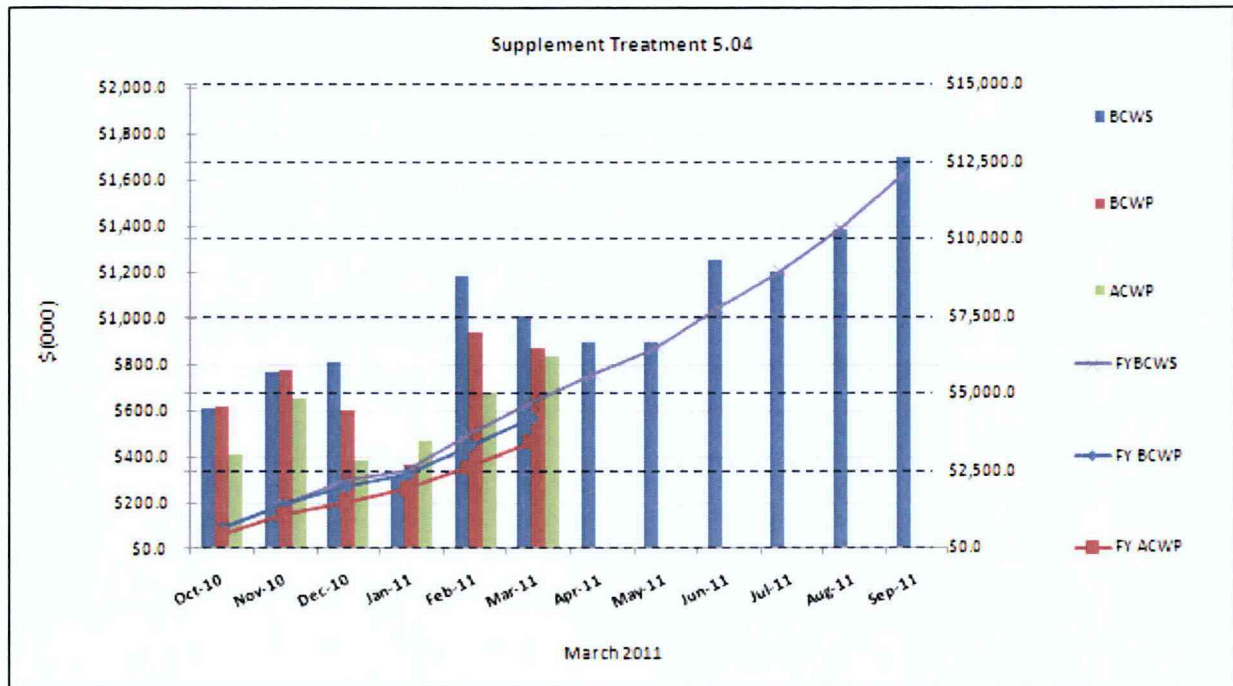


Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62
Nov-10	\$4,412.7	\$5,622.7	\$5,006.7	1.27	1.12	\$7,404.3	\$8,555.3	\$9,714.3	1.16	0.88
Dec-10	\$5,209.7	\$6,682.7	\$5,494.0	1.28	1.22	\$12,614.0	\$15,238.0	\$15,208.3	1.21	1.00
Jan-11	\$5,310.0	\$4,820.2	\$6,975.6	0.91	0.69	\$17,924.0	\$20,058.2	\$22,183.9	1.12	0.90
Feb-11	\$6,670.0	\$6,253.2	\$7,006.6	0.94	0.89	\$24,594.0	\$26,311.4	\$29,190.5	1.07	0.90
Mar-11	\$7,513.3	\$6,825.3	\$9,447.6	0.91	0.72	\$32,107.3	\$33,136.7	\$38,638.1	1.03	0.86
Apr-11	\$6,709.5					\$38,816.8				
May-11	\$5,854.3					\$44,671.1				
Jun-11	\$10,202.7					\$54,873.8				
Jul-11	\$9,031.9					\$63,905.7				
Aug-11	\$9,630.5					\$73,536.2				
Sep-11	\$16,001.6					\$89,537.8				

CTD	\$193,377.3	\$187,489.9	\$181,167.2	0.97	1.03
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Earned Value Month	BCWS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACVP	FY SPI	FY CPI
Oct-10	\$610.0	\$619.9	\$412.6	1.02	1.50	\$610.0	\$619.9	\$412.6	1.02	1.50
Nov-10	\$768.6	\$773.1	\$657.3	1.01	1.18	\$1,378.6	\$1,393.0	\$1,069.9	1.01	1.30
Dec-10	\$807.0	\$602.2	\$384.2	0.75	1.57	\$2,185.6	\$1,995.2	\$1,454.1	0.91	1.37
Jan-11	\$309.8	\$368.0	\$470.6	1.19	0.78	\$2,495.4	\$2,363.2	\$1,924.7	0.95	1.23
Feb-11	\$1,186.8	\$941.8	\$680.9	0.79	1.38	\$3,682.2	\$3,305.0	\$2,605.6	0.90	1.27
Mar-11	\$1,013.9	\$870.9	\$834.5	0.86	1.04	\$4,696.1	\$4,175.9	\$3,440.1	0.89	1.21
Apr-11	\$901.6					\$5,597.7				
May-11	\$897.5					\$6,495.2				
Jun-11	\$1,251.4					\$7,746.6				
Jul-11	\$1,205.8					\$8,952.4				
Aug-11	\$1,385.8					\$10,338.2				
Sep-11	\$1,700.7					\$12,038.9				

CTD	\$7,587.7	\$7,067.4	\$6,241.3	0.93	1.13
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## **Acquisition of New Facilities**

**M-090-11, Complete the Negotiation of No More Than Two Canister Storage Facility Construction Interim Milestones**, Due: 12/31/12, Status: On Schedule. Negotiations are not yet underway.

**M-090-00, Acquire/modify facilities for storage of IHLW**, Due: 12/31/2019, Status: On Schedule

**M-047-06, Complete negotiation of no more than two interim milestones governing work necessary to support completion of M-047-00**, Due: 06/30/12, Status: Negotiations are not yet underway.

**M-047-00, Complete Work Necessary to provide facilities for management of secondary waste from the WTP**, Due: 12/31/2022, Status: On Schedule

### **Significant Past Accomplishments:**

None

### **Significant Planned Actions in the Next Six Months:**

None

### **Issues:**

None



## **Supplemental Treatment and Part B Permit Applications**

**M-062-30, Complete negotiations establishing milestones for near term actions, Due:** 10/25/11, Status: On schedule. Draft agreement in principle (AIP) provided by ORP to Ecology on April 8, 2011. Milestone negotiations are not yet underway. See “Issues” below for further discussion.

**M-062-45ZZ, Negotiate a one-time supplemental treatment selection, Due:** 4/30/2015, Status: On schedule. Negotiations are not yet underway. See “Issues” below for further discussion.

**M-062-45ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones, Due:** 4/30/2015, Status: On Schedule.

**M-062-31-T01, Complete final design and submit RCRA Part B permit mod request, Due:** 4/30/2016, Status: On schedule

**M-062-32-T01, Start construction of supplemental vitrification treatment facility and/or WTP enhancements, Due:** 4/30/2018, Status: On schedule

**M-062-33-T01, Complete construction of supplemental vitrification treatment facility and/or WTP enhancements, Due:** 4/30/2021, Status: On schedule

**M-062-45XX, No later than 12/31/2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5, due:** 12/31/2021, Status: On Schedule

**M-062-34-T01, Complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements, Due:** 12/30/2022, Status: On schedule

**M-062-21, Annually, submit data that demonstrates operation of the WTP, Due:** 2/28/2023, Status: On Schedule

**M-062-00, Complete Pretreatment Processing and Vitrification of HLW and LAW Tank Wastes, Due:** 12/31/2047, Status: On Schedule

### **Significant Past Accomplishments:**

- Draft agreement in principle (AIP) provided by ORP to Ecology on April 8, 2011.

### **Significant Planned Actions in the Next Six Months:**

- ORP and Ecology negotiate Agreement in Principle for M-62-30 negotiations in the next 30 days.

### **Issues:**

- ORP received a letter from Ecology on 01/13/11 stating Ecology has "...formed the opinion that USDOE actions jeopardize completion of HFFACO Milestone M-062-30."
- DOE-ORP letter 11-ESQ-024 (sent to Ecology on 02/03/11) responded to the 01/13/11 Ecology letter, and ORP submitted a draft AIP to Ecology on 04/08/2011 to establish negotiations for HFFACO Milestone M-062-30.



## System Plan

**M-062-40B, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2011, Status: On Schedule**

**M-062-40C, Select a minimum of three scenarios that will be analyzed in the system plan, Due: 10/31/2013, Status: On Schedule**

**M-062-40D, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2014, Status: On Schedule**

**M-062-40ZZ, Submit a one-time Tank Waste Supplemental Treatment Technologies report if a supplemental treatment technology is proposed other than a 2nd LAW, Due: 10/31/2014, Status: On Schedule.**

**M-062-45-T01, Every six years, within six-months after last revision of the System Plan, negotiate tank waste retrieval sequencing, Due: 4/30/2015, Status: On Schedule**

### Significant Past Accomplishments:

Modeling and result verification for Scenario 1: Baseline Case, Scenario 2: TRU to WTP and Scenario 4: WTP Delay with 10% increased Vitrification were completed during March 2011. Results of the Baseline Case were reviewed with OPR and Ecology on March 21, 2011. Modeling was started or nearly completed for Scenario 6: WTP Delay w/8 new DSTs, Scenario 9: Early U Farm Retrieval, Scenario 10: Increased SST Retrieval Duration and Scenario 5: 2020 Vision.

### Significant Planned Actions in the Next Six Months:

Work on System Plan Rev. 6 supporting M-062-40B during the next six months will include the following activities: Complete HTWOS modeling, V&V and data analysis and perform periodic reviews with ORP and Ecology. The reviews will include reviews of the model results as well as 50% and 90% reviews of the System Plan report.

### Issues:

None

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

**M-062-01W, Submit Semi-Annual Project Compliance Report, Due: 7/31/2011, Status: On Schedule**

**M-062-49, Submit a report to Ecology demonstrating that the WTP is designed to accomplish, pretreat 100% of retrievable waste, vitrify 100% of separated hi level waste, WTP LAW with Supplemental treatment can vitrify 100% of separated low level waste stream, Due: 10/31/2011, Status: BNI was provided direction to prepare this report on March 30, 2011, letter 11-WTP-106 Subject: Tri-Party Agreement (TPA) Changes and BNI Support.**

There are about 3,284 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,125 craft, 579 non-manual, and about 187 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through March 2011 is 58%, design and engineering is 81% complete, procurement is 61% complete, construction is 54% complete and Start-Up and Commissioning is 12% complete.

The overall WTP Project Schedule Variance (SV) in March was a positive \$4.0M, the Cost Variance (CV) was a positive \$0.7M. The positive cost variance was due to Research and Technology and Commissioning control accounts and the schedule variances came primarily from the Plant Equipment and Commissioning control accounts.

Following is the status through the end of March for current project issues:

### **Significant Past Accomplishments:**

- Revised Project Execution Plan sent to HQ first week of March

### **Significant Planned Actions in the Next Six Months:**

- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Comment with Large Scale Integrated Testing
- Erection of PT 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Commence Siding and Roofing of HLW Annex
- Complete vendor fabrication of the LAW Carbon Bed Adsorber (CBA)
- Complete the BOF water treatment facility

### **Issues:**

No significant issues at this time.



## Pretreatment (PT) Facility

### Significant Past Accomplishments:

The PT Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Through April 2011, overall facility percent complete is 46%, engineering is 77% complete, procurement is 43% complete, and construction is 35% complete.

In April, overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 56ft to 98ft elevations. Construction completions for April include placement of three 5<sup>th</sup> lift (77ft to 98ft elevation) walls for 356 CY.

On-going work includes fabrication of piping modules, installation of drain piping, service air piping, cable trays and supports, ductwork, and sparge tubing in the hot cell.

The permitting strategy for the on-site vessels modifications has been developed jointly with Ecology. The permitting strategy for the off-site vessels modifications has been agreed upon with Ecology, and is in the process of being finalized. Engineering continues to implement changes from the technical issue resolutions into Piping and Instrumentation Design (P&ID) and piping isometric drawings. PT engineering issued 52 piping isometric drawings and equipment lists for the Pretreatment Filter Cave Handling (PFH), Pretreatment In-cell Handling (PIH), Pulse Jet Ventilation (PJV), and Treated LAW Evaporation Process (TLP) systems, as well as issuing 57 hanger drawings, 20 utility rack electrical diagrams, and 35 circuits on consolidated block diagrams. Approved Request for Technology Development (RTD) for fire testing of ion exchange column resin for the Cesium Ion Exchange Process (CXP) system in support of the Pretreatment Vessel Vent Process (PVP)/Process Vessel Vent Exhaust (PVV) systems issue resolution.

Thirty jet pump pairs, six flow-indicator rotameters, and four decontamination heating deductors for the PIH system are ready for shipping. Procurement issued material requisitions for quote on plant wash, fluidic, and utility racks, and the vessel vent carbon bed absorber.

### Significant Planned Actions in the Next Six Months:

- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning and initiate fabrication and testing for the Large Scale testing for the validation of vessel mixing
- Issue the revised P&ID's for the PVP system and the PVV system
- Complete placement of one 56-ft elevation slab, completion of the basemat slab, two 4<sup>th</sup> lift (56ft to 77ft) walls, twenty seven 5<sup>th</sup> lift walls, one 98ft slab, and initial placements of the Control Building slab, totaling approximately 4,314 CY.
- Complete erection of 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Award contract for High Efficiency Mist Eliminator (HEME)
- Award contract for on-site vessel modifications

**Issues:**

- **Vessel Critical Path:** Fabrication of vessel HLP-22 continues to be the critical path for the PT Facility. The fabrication of the vessel is in progress and on track to complete as planned by October 2012. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel modifications. Initial site work and pre-modification preparation work has begun. Schedules for the vessel modifications and permit needs have been provided to Ecology. The current plan is to award the first set of vessels modifications in June 2011. Ecology authorization is required to proceed with the vessel alteration for Waste Feed Receipt Process (FRP) vessels 2A/B/C/D. Ecology is being briefed routinely on the status of vessel design, fabrication and permitting schedule, due to the critical nature of this activity.
  - **LOAM Test Results:** The physical benchmark testing of the LOAM for application to the 5 non-Newtonian vessels is complete. The test report has been issued for DOE review, and scheduled to be finalized on May 20, 2011.
  - **PVP/PVV System Upgrades:** The PVP/PVV systems were upgraded from passive to active safety systems to maintain negative pressure during all normal, off-normal, and Design Basis Earthquake (DBE) conditions. Changes in the requirement of the Entrainment factor, the postulated aerosol loading was increased by several orders of magnitude. This affected PVP/PVVs ability to meet functional requirements during off-normal condition. The execution strategy issued identifies the following actions to ensure that the system design meets the functional criteria:
    1. Develop an improved aerosol model based on testing that is aligned with the physical plant configuration. Preliminary indications are that this would lower the aerosol loading significantly.
      - a. Draft aerosol testing strategy has been issued.
    2. Evaluate alternative operating scenarios to reduce aerosol generation.
- Procure the long-lead equipment (Scrubber and HEME) as SC-1 to mitigate schedule constraint.



## High-Level Waste (HLW) Facility

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) facility. The concentrate is blended with glass formers and converted into molten glass in one of the two HLW melters and then poured into cylindrical stainless steel canisters. After cooling, the canisters are sealed and decontaminated prior to shipment to interim storage. The HLW Facility is 53% complete overall, with engineering design 86% complete, procurement 65% complete, and construction 33% complete.

### Significant Past Accomplishments:

The majority of HLW Filter Cave activities have transitioned from procurement to the installation phase. Installation of the C5V supply header and exhaust headers are finishing, and work will begin on the vertical risers. Additional activities include the installation of support steel to the +8ft elevation and layout of large-bore piping by direct-hire craft. Installation of steel and piping will continue to the +14ft elevation to coordinate with upcoming filter housing installations.

Fabrication of the final C5V filter housing is complete, and vendor efforts are focused on the HOP and PJV filter housings to support the HLW schedule. Filter housings and dampers will be installed sequentially starting from the outermost units and working in towards the center of the Filter Cave starting with the first C5V filter housing in mid-August. All of the C5V housing and remote-operated damper installations are scheduled for completion in December 2011. The remaining piping and installation of plate steel decking will be complete in April 2012.

### Significant Planned Actions in the Next Six Months:

- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of Annex
- Receipt of Melter Cave 1 and 2 Feed and Feed Prep vessels

### Issues:

The fabrication and delivery of HLW vessels is being monitored closely due to long lead times and construction acceleration. Vessel status and progress is reported weekly to ensure completion and delivery prior to the scheduled installation dates.

Unit Rates for commodity installation are below expectations resulting in reduced cost performance. Performance Improvement Plans are being developed to improve communications and efficiency throughout engineering, procurement and construction.

Weld quality issues with the C5V Supply and Exhaust Header supports (i.e., saddles) required temporary repositioning of the 60" Exhaust header in the filter cave to support repair and re-examination. However, the project remains on schedule with no impact to the HLW critical path.

## **Low-Activity Waste (LAW) Facility**

### **Significant Past Accomplishments:**

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 65%, engineering is 90% complete, procurement is 82% complete, and construction is 62% complete.

LAW secondary offgas treatment systems component procurement activities continued. Vendor activities are progressing as scheduled for all offgas system components with the exception of the carbon bed adsorber (see “issues” below). Other procurement activities included issuance of a material requisition for the purchase of jet-pump-pair mixers for the LAW feed preparation vessels and the release for shipment of a container decontamination refrigeration unit.

BNI completed installation of all the cooling panels in the pour caves that are essential to maintaining safe operating temperatures. Installation was completed also on the personnel elevator, the pour cave steel thresholds, the conduit in the LAW switchgear building, and an air handling unit on the top floor of the facility. Thermite welding of rails in the North finishing line continued, as well as installation of the ASX auto-sampling system, fire alarm system, Low-Voltage Electrical (LVE) system equipment, cask handling area door electrical components, container finishing line hoists, and stairs over the roof pipe rack. Other normal activities continued, including installation of piping for the Non-Radioactive Liquid Waste Disposal (NLD), Radioactive Liquid Waste Disposal (RLD), and plant cooling water systems within the LAW, as well as installation of cable tray, conduit and wiring, instrument enclosures, lighting fixtures, partition wall framing, gypsum wallboard, and coatings.

Integrated Control Network (ICN) development for LAW systems continued with software reviews related to the primary offgas process and container export handling systems. The radioactive liquid waste disposal system control software was accepted. Commissioning Operations personnel are working with BNI Engineering to resolve carbon bed adsorber guard bed life and media replacement safety concerns.

### **Significant Planned Actions in the Next Six Months:**

- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)
- Complete installation of container handling line shield doors

### **Issues:**

Carbon Bed Adsorber fabrication difficulties have been encountered related to welding warpage. Additional Bechtel personnel have been deployed to the vendor facility including welding engineers to resolve the issue and maintain the current ship date of November 2011. Revision of assembly techniques and attention to all aspects of quality control are in place to help ensure success and preserve the schedule.



## **Analytical Laboratory**

### **Significant Past Accomplishments:**

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, engineering is 80% complete, procurement is 74% complete, and construction is 65% complete.

On-going construction work includes: the installation of piping in the C2V/C3V system pits, autosampler equipment above the hot cells, trolleys in the hot cells, bulk piping/hanger installation, and conduit in various planning areas. Construction completed installation of the grout covers in the area of the hot cells.

Engineering completed scoping of 15 medium-voltage electrical drawings, all mechanical handling, "M7", drawings for in-cell handling and radioactive solid waste handling, and system block diagram, "J1", drawings for all lab systems. Material requisitions for jet-pump-pair fluidic devices were issued.

As construction and engineering continue commissioning personnel are diligently working on procedure development for caustic and/or oxidative leach during the batch processing of the feed slurry, as well incorporating comments to the Waste Acceptance Criteria Data Quality Objective Report. The operations team is inquiring about the date the LAB will have its environmental permits to allow for methods validation. The operations staff accepted proposed vendor cost savings measures to replace drawer slides and counter top fixtures, other suggestions were either denied or referred to the design authority.

### **Significant Planned Actions in the Next Six Months:**

- Install fume hoods (Forecast July 2011)
- Install LAB waste drum bogie transfer port (Forecast June 2011)
- Install Autosampler HEPA filter housings (Forecast June 2011)
- Install hot cell monorail airlocks (Forecast August 2011)
- Complete installation of Autosampler System (Milestone date of October 2011)

### **Issues:**

No major issues.

## **Balance of Facilities (BOF)**

### **Significant Past Accomplishments:**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 46%, engineering is 77% complete, procurement is 46% complete, and construction is 60% complete.

Construction of BOF is progressing, and systems are being completed as demonstrated by the completion of the water treatment facility. Progress continues in the areas of plant service air for the glass former facility, fire detection equipment for the T-52 building, and cable, electrical terminations, and pressure safety valve instrumentation for the plant cooling water system in the chiller compressor plant.

The operations staff continues to evaluate facilities as they are constructed and turned over, and proposed a field change to add low point drains to the domestic water system, and concerns with the fact that the glass former facility does not have a redundant air dryer. They are also actively involved in evaluating the requirements of the emergency turbine generators.

### **Significant Planned Actions in the Next Six Months:**

- Complete construction of cooling tower (Forecast June 2011)
- Complete construction of fuel oil pumphouse (Forecast August 2011)
- Substantially complete construction of main switchgear building (Forecast June 2011)
- Complete construction of BOF switchgear building (Forecast July 2011)
- Install structural steel for anhydrous ammonia facility (Forecast August 2011)
- Emergency turbine generator supplier selection and notice to proceed (Forecast July 2011)
- Award hi-purity gas subcontract (Forecast May 2011)

### **Issues:**

- Welding of anhydrous ammonia vessel
- Evaluation, selection, and procurement of emergency turbine generator



## Through March 2011

Source: WTP Contract Performance Report - Format 1, Data for March 2011

*Note:* Starting with the June 2009 report, facility construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase I of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete.

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**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Project Summary Report

May 19, 2011



## Office of River Protection

Consent Decree 08-5085-FVS

Project Summary Report

May 19, 2011

8:30 a.m. – 11:00 a.m.

Page	Topic	Leads
1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon
5	SST Retrieval and Closure - D-00B-01, -02, -03, -04 - TWRWP Status	Chris Kemp / Jeff Lyon
8	WTP - Immobilization Plant Project - D-00A-06, D-00A-17, D-00A-01	Wahed Abdul / Jeff Trent / Gary Olsen / Dan McDonald
10	WTP Pretreatment (PT) Facility - D-00A-18, -19, -13, -14, -15, 16	Wahed Abdul / Dan McDonald
13	High-Level Waste (HLW) Facility - D-00A-20, -21, 02, 03	Jason Young / Dan McDonald
15	Low-Activity Waste (LAW) Facility - D-00A-07, -08, -09	Gary Olsen / Dan McDonald
17	Analytical Laboratory (LAB) - D-00A-005	
19	Balance of Facilities (BOF) - D-00A-12	

Fiscal Year 2011 Consent Decree Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00A-20	Complete Construction of Structural Steel to Elevation 14' in HLW Facility	12/31/10	01/31/10										
D-00C-01B	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/11	01/25/11										
D-00C-02D	Submit to Ecology and Oregon Monthly Summary Reports	02/28/11	2/25/11										
D-00C-02E	Submit to Ecology and Oregon Monthly Summary Reports	03/31/11	03/24/11										
D-00C-02F	Submit to Ecology and Oregon Monthly Summary Reports	04/30/11	04/29/11										
D-00C-02G	Submit to Ecology and Oregon Monthly Summary Reports	05/31/11		X									
**D-00C-02H	Submit to Ecology and Oregon Monthly Summary Reports	06/30/11		X									
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.													



Fiscal Year 2011 Consent Decree Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00C-01C	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/11		X									

### Fiscal Year 2012 Consent Decree Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abovance	Dispute Resolution
D-00C-02L	Submit to Ecology and Oregon Monthly Summary Reports	10/31/11		X									
**D-00C-02M	Submit to Ecology and Oregon Monthly Summary Reports	11/30/11		X									
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.													
D-00C-01D	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/12		X									
D-00C-01E	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/12		X									



## Reports

**D-00C-01 series, Submit to Ecology & State of Oregon Semi-Annual Report,** Due: Semi-Annually – January 31<sup>st</sup> and July 31<sup>st</sup> of each year.

**D-00C-02 series, Submit to Ecology & State of Oregon Monthly Summary Report Documenting Progress During Previous Month,** Due: End of Each Month, Status: On Schedule

**D-006-00-A1, Provide State of Oregon notice of meetings in D-006-00-A, etc. no less than 30 days before they are scheduled,** Due: 9/25/2013, Status: On Schedule

**D-006-00-A, Meet Approximately Every Three Years After Entry of Decree to review requirements of the Consent Decree,** Due: 10/25/2013, Status: On Schedule

## **SST Retrieval and Closure Program**

**D-00B-01, Complete Retrieval of Tank Wastes from 10 Remaining SSTs in WMA-C, Due:** 9/30/2014, Status: On Schedule

**D-00B-01A thru J, Submit Tank Retrieval Complete Certification, Due:** TBD

Pursuant to the requirement at IV(B)(5) of the Consent Decree (CD) DOE must submit to Ecology a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix "C", Part 1, of the CD. Tanks currently in retrieval status are C-108, C-109, C-110, C-104, and C-111.

**D-00B-02, Advise Ecology of the 9 SST's from which Waste Will Be Retrieved by 2022, Due:** 9/30/2014, Status: On Schedule. ORP and Ecology began meeting on December 13, 2010, to discuss the selection of the next nine tanks to be retrieved and why ORP believes those nine tanks should be in A/AX Farms. The last meeting was held March 9, 2011. Further discussions are being planned. See discussion under "Issues" below.

**D-00B-03, Initiate Startup Retrieval in At Least 5 of 9 SSTs in D-00B-02, Due:** 12/31/2017, Status: On Schedule

**D-00B-04, Complete Retrieval of Tank Wastes from the 9 SSTs in D-00B-02, Due:** 9/30/2022, Status: On Schedule

**D-00B-04A thru I, Submit Tank Retrieval Complete Certification, Due:** TBD

### **Significant Past Accomplishments:**

1. Continued retrieval at C-104 using modified sluicing process.
2. Continued C-107 electrical upgrades and control trailer installation.
3. Continued construction activities for C-108 equipment installation for Hard Heel Removal.
4. Completed acceptance testing of the C-107 MARS arm.
5. Initiated installation of the MARS arm equipment in C Farm at C-107.
6. Completed retrieving the C-109 heel samples.
7. Continued design activities for C-112 sluicing system.
8. Initiated removal of legacy equipment at C-112.
9. Continued testing of a MARS sluice educator system at Columbia Energy in Pasco.

### **Significant Planned Activities in the Next Six Months:**

1. Complete the C-101 design, initiate long lead procurements and initiate legacy equipment removals.
2. Complete C-104 retrieval.
3. Complete construction/installation of MARs at C-107.
4. Complete startup of C-107 MARS retrieval.

5. Initiate construction of C-108 hard heel retrieval system, and start up of retrieval activities.
6. Replace the AN-106 supernatant pump to support C-108 and C-107 retrievals.
7. Complete C-112 design, initiate long lead procurements and initiate legacy equipment removals.
8. Finish testing of the MARS with the vacuum educator.

**Issues:**

D-00B-02, Advise Ecology of the 9 SST's from which Waste Will Be Retrieved by 2022:

ORP and Ecology began meeting on December 13, 2010, to discuss the selection of the next nine tanks to be retrieved and why ORP believes those nine tanks should be in A/AX Farms. The last meeting was held March 9, 2011. Further discussions are being planned.

C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS ROD is in the winter of 2011.



## TWRWP Status

Tank	TWRWP	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520	MRS (per 10/7/10 agreement, to be Modified Sluicing)	-	-
C-102	RPP-22393	Modified Sluicing	MS-ITV	-
C-103	RPP-21895	Retrieval Completed		
C-104	RPP-22393	Modified Sluicing	MS-ITV	-
C-105	RPP-22520	MRS	-	-
C-106		Retrieval Completed		
C-107	RPP-22393	MARS-S		
C-108	RPP-22393	Modified Sluicing	Chemical Dissolution	MS-ITV
C-109	RPP-21895	Modified Sluicing	MS-ITV	-
C-110	RPP-33116	Modified Sluicing	-	-
C-111	RPP-37739	Modified Sluicing	-	-
C-112	RPP-22393	Modified Sluicing	MS-ITV	-

### Issues:

- Ecology requested a schedule for any future TWRWP changes.
- DOE wants to issue a revised Tank Retrieval Technology Roadmap Document and ORP want to resolve 2<sup>nd</sup> and 3<sup>rd</sup> technology discussion.
- ORP wants to reopen discussion on end of retrieval discussions that include cost benefit analysis and how the finish of a retrieval decision occurs.

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

**D-00A-06, Complete Methods Validations**, Due: 12/31/2017, Status: On Schedule

**D-00A-17, Hot Start of Waste Treatment Plant**, Due: 12/31/2019, Status: On Schedule

**D-00A-01, Achieve Initial Plant Operations for WTP**, Due: 12/31/2022, Status: On Schedule

There are about 3,284 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,125 craft, 579 non-manual, and about 187 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through March 2011 is 58%, design and engineering is 81% complete, procurement is 61% complete, construction is 54% complete and Start-Up and Commissioning is 12% complete.

The overall WTP Project Schedule Variance (SV) in March was a positive \$4.0M, the Cost Variance (CV) was a positive \$0.7M. The positive cost variance was due to Research and Technology and Commissioning control accounts and the schedule variances came primarily from the Plant Equipment and Commissioning control accounts.

Following is the status through the end of March for current project issues:

### **Significant Past Accomplishments:**

- Revised Project Execution Plan sent to HQ first week of March

### **Significant Planned Actions in the Next Six Months:**

- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Comment with Large Scale Integrated Testing
- Erection of PT 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Commence Siding and Roofing of HLW Annex
- Complete vendor fabrication of the LAW Carbon Bed Adsorber (CBA)
- Complete the BOF water treatment facility

### **Issues:**

No significant issues at this time.

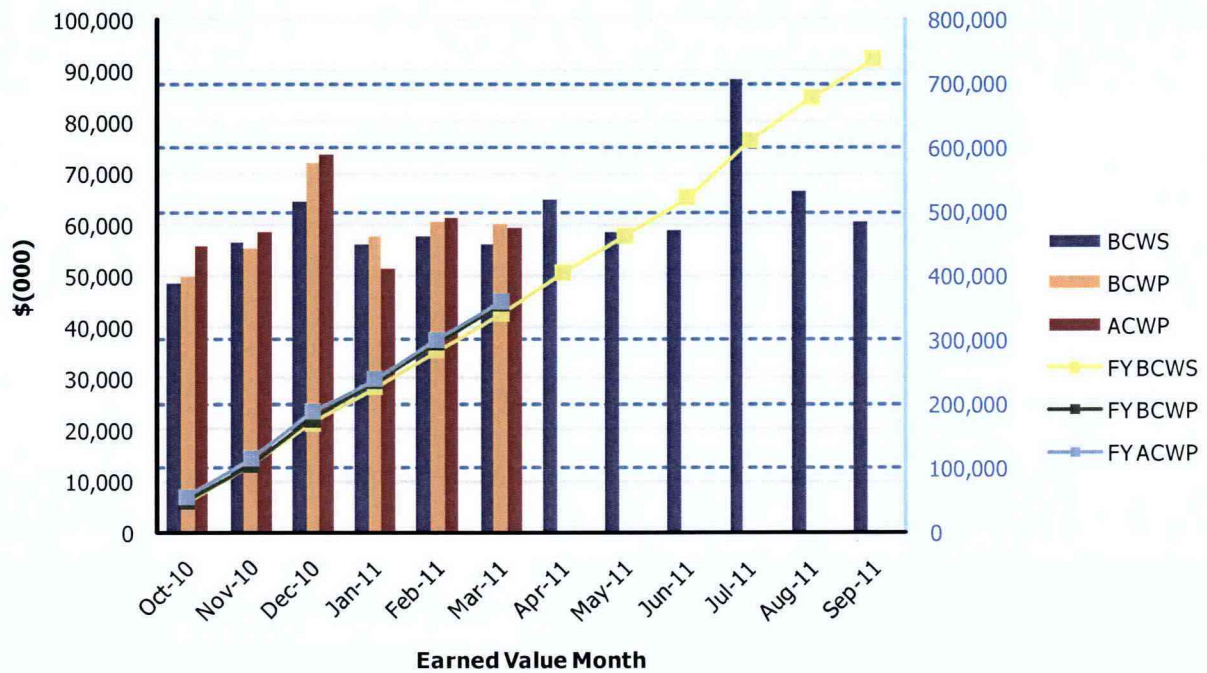
## WTP – Fiscal Year To-Date Performance

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

**River Protection**  
**01-D-416 - Waste Treatment Plant (WTP) Project**

Monthly EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$48,550	\$49,962	\$55,880	1.03	0.89	\$48,550	\$49,962	\$55,880	1.03	0.89
Nov 2010	\$56,608	\$55,427	\$58,449	0.98	0.95	\$105,158	\$105,389	\$114,329	1.00	0.92
Dec 2010	\$64,533	\$71,852	\$73,610	1.11	0.98	\$169,691	\$177,241	\$187,939	1.04	0.94
Jan 2011	\$55,988	\$57,756	\$51,327	1.03	1.13	\$225,679	\$234,997	\$239,266	1.04	0.98
Feb 2011	\$57,941	\$60,462	\$61,199	1.04	0.99	\$283,620	\$295,459	\$300,465	1.04	0.98
Mar 2011	\$56,009	\$60,032	\$59,335	1.07	1.01	\$339,629	\$355,491	\$359,800	1.05	0.99
Apr 2011	\$64,783					\$404,412				
May 2011	\$58,696					\$463,108				
Jun 2011	\$59,092					\$522,200				
Jul 2011	\$88,480					\$610,680				
Aug 2011	\$66,582					\$677,262				
Sep 2011	\$60,343					\$737,605				
PTD	\$6,066,979	\$6,091,039	\$6,117,829	1.00	1.00					



## **Pretreatment (PT) Facility**

**D-00A-19, Complete Elevation 98' Concrete Floor Slab in PT Facility, Due: 12/31/2014, Status: On Schedule**

**D-00A-13, Complete Installation of Pretreatment Feed Separation Vessels, Due: 12/31/2015, Status: On Schedule**

**D-00A-14, PT Facility Construction Substantially Complete, Due: 12/31/2017, Status: On Schedule**

**D-00A-15, Start PT Facility Cold Commissioning, Due: 12/31/2018, Status: On Schedule**

**D-00A-16, PT Facility Hot Commissioning Complete, Due: 12/31/2019, Status: On Schedule**

### **Significant Past Accomplishments:**

The PT Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Through April 2011, overall facility percent complete is 46%, engineering is 77% complete, procurement is 43% complete, and construction is 35% complete.

In April, overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 56ft to 98ft elevations. Construction completions for April include placement of three 5<sup>th</sup> lift (77ft to 98ft elevation) walls for 356 CY.

On-going work includes fabrication of piping modules, installation of drain piping, service air piping, cable trays and supports, ductwork, and sparge tubing in the hot cell.

The permitting strategy for the on-site vessels modifications has been developed jointly with Ecology. The permitting strategy for the off-site vessels modifications has been agreed upon with Ecology, and is in the process of being finalized. Engineering continues to implement changes from the technical issue resolutions into Piping and Instrumentation Design (P&ID) and piping isometric drawings. PT engineering issued 52 piping isometric drawings and equipment lists for the Pretreatment Filter Cave Handling (PFH), Pretreatment In-cell Handling (PIH), Pulse Jet Ventilation (PJV), and Treated LAW Evaporation Process (TLP) systems, as well as issuing 57 hanger drawings, 20 utility rack electrical diagrams, and 35 circuits on consolidated block diagrams. Approved Request for Technology Development (RTD) for fire testing of ion exchange column resin for the Cesium Ion Exchange Process (CXP) system in support of the Pretreatment Vessel Vent Process (PVP)/Process Vessel Vent Exhaust (PVV) systems issue resolution.

Thirty jet pump pairs, six flow-indicator rotameters, and four decontamination heating deductors for the PIH system are ready for shipping. Procurement issued material requisitions for quote on plant wash, fluidic, and utility racks, and the vessel vent carbon bed absorber.

### **Significant Planned Actions in the Next Six Months:**

- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning and initiate fabrication and testing for the Large Scale testing for the validation of vessel mixing
- Issue the revised P&ID's for the PVP system and the PVV system

- Complete placement of one 56-ft elevation slab, completion of the basemat slab, two 4<sup>th</sup> lift (56ft to 77ft) walls, twenty seven 5<sup>th</sup> lift walls, one 98ft slab, and initial placements of the Control Building slab, totaling approximately 4,314 CY
- Complete erection of 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Award contract for High Efficiency Mist Eliminator (HEME)
- Award contract for on-site vessel modifications

**Issues:**

- Vessel Critical Path: Fabrication of vessel HLP-22 continues to be the critical path for the PT Facility. The fabrication of the vessel is in progress and on track to complete as planned by October 2012. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel modifications. Initial site work and pre-modification preparation work has begun. Schedules for the vessel modifications and permit needs have been provided to Ecology. The current plan is to award the first set of vessels modifications in June 2011. Ecology authorization is required to proceed with the vessel alteration for Waste Feed Receipt Process (FRP) vessels 2A/B/C/D. Ecology is being briefed routinely on the status of vessel design, fabrication and permitting schedule, due to the critical nature of this activity.
- LOAM Test Results: The physical benchmark testing of the LOAM for application to the 5 non-Newtonian vessels is complete. The test report has been issued for DOE review, and scheduled to be finalized on May 20, 2011.
- PVP/PVV System Upgrades: The PVP/PVV systems were upgraded from passive to active safety systems to maintain negative pressure during all normal, off-normal, and Design Basis Earthquake (DBE) conditions. Changes in the requirement of the Entrainment factor, the postulated aerosol loading was increased by several orders of magnitude. This affected PVP/PVVs ability to meet functional requirements during off-normal condition. The execution strategy issued identifies the following actions to ensure that the system design meets the functional criteria:
  1. Develop an improved aerosol model based on testing that is aligned with the physical plant configuration. Preliminary indications are that this would lower the aerosol loading significantly.
    - a. Draft aerosol testing strategy has been issued.
  2. Evaluate alternative operating scenarios to reduce aerosol generation.

Procure the long-lead equipment (Scrubber and HEME) as SC-1 to mitigate schedule constraint.



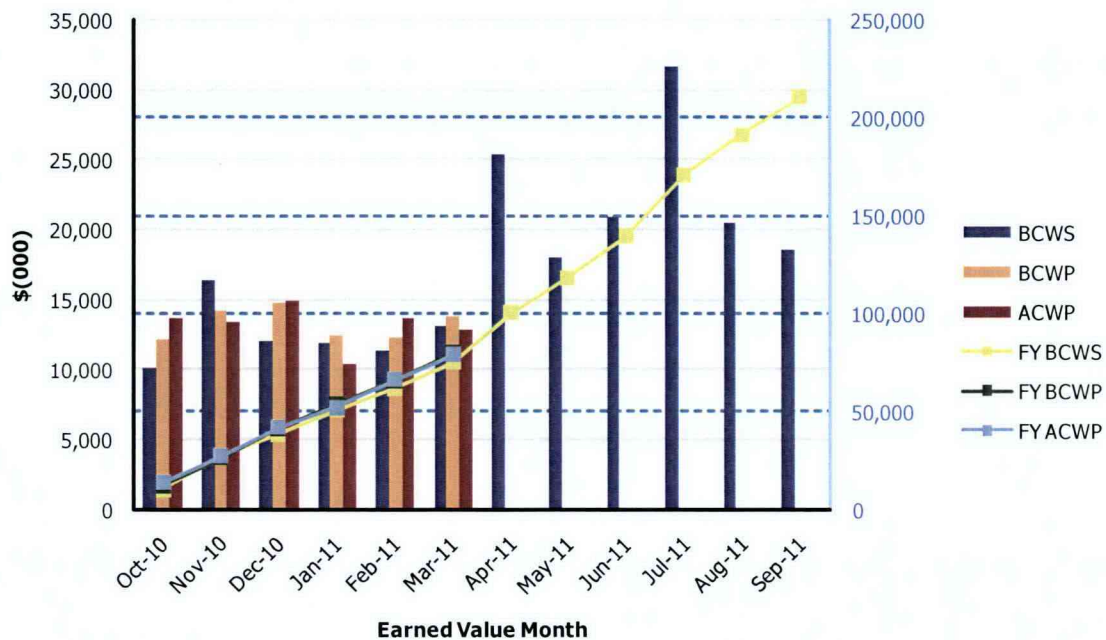
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

<b>River Protection</b> <b>01-D-16E - Pretreatment Facility</b>
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Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$10,196	\$12,179	\$13,730	1.19	0.89	\$10,196	\$12,179	\$13,730	1.19	0.89
Nov 2010	\$16,462	\$14,257	\$13,360	0.87	1.07	\$26,658	\$26,436	\$27,090	0.99	0.98
Dec 2010	\$12,060	\$14,788	\$14,869	1.23	0.99	\$38,718	\$41,224	\$41,959	1.06	0.98
Jan 2011	\$11,902	\$12,449	\$10,403	1.05	1.20	\$50,620	\$53,673	\$52,362	1.06	1.03
Feb 2011	\$11,428	\$12,373	\$13,692	1.08	0.90	\$62,048	\$66,046	\$66,054	1.06	1.00
Mar 2011	\$13,145	\$13,809	\$12,923	1.05	1.07	\$75,193	\$79,855	\$78,977	1.06	1.01
Apr 2011	\$25,435					\$100,628				
May 2011	\$17,988					\$118,615				
Jun 2011	\$20,895					\$139,511				
Jul 2011	\$31,672					\$171,182				
Aug 2011	\$20,486					\$191,668				
Sep 2011	\$18,585					\$210,253				

PTD \$1,131,097 \$1,144,894 \$1,112,457 1.01 1.03



## High-Level Waste (HLW) Facility

**D-00A-21, Complete Construction of Structural Steel to 37' in HLW Facility, Due:** 12/31/2012, Status: On Schedule

**D-00A-02, HLW Facility Construction Substantially Complete, Due:** 12/31/2016, Status: On Schedule

**D-00A-03, Start HLW Facility Cold Commissioning, Due:** 6/30/201, Status: On Schedule

**D-00A-04, HLW Facility Hot Commissioning Complete, Due:** 12/31/2019, Status: On Schedule

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) facility. The concentrate is blended with glass formers and converted into molten glass in one of the two HLW melters and then poured into cylindrical stainless steel canisters. After cooling, the canisters are sealed and decontaminated prior to shipment to interim storage. The HLW Facility is 53% complete overall, with engineering design 86% complete, procurement 65% complete, and construction 33% complete.

### Significant Past Accomplishments:

The majority of HLW Filter Cave activities have transitioned from procurement to the installation phase. Installation of the C5V supply header and exhaust headers are finishing, and work will begin on the vertical risers. Additional activities include the installation of support steel to the +8ft elevation and layout of large-bore piping by direct-hire craft. Installation of steel and piping will continue to the +14ft elevation to coordinate with upcoming filter housing installations.

Fabrication of the final C5V filter housing is complete, and vendor efforts are focused on the HOP and PJV filter housings to support the HLW schedule. Filter housings and dampers will be installed sequentially starting from the outermost units and working in towards the center of the Filter Cave starting with the first C5V filter housing in mid-August. All of the C5V housing and remote-operated damper installations are scheduled for completion in December 2011. The remaining piping and installation of plate steel decking will be complete in April 2012.

### Significant Planned Actions in the Next Six Months:

- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of Annex
- Receipt of Melter Cave 1 and 2 Feed and Feed Prep vessels

### Issues:

The fabrication and delivery of HLW vessels is being monitored closely due to long lead times and construction acceleration. Vessel status and progress is reported weekly to ensure completion and delivery prior to the scheduled installation dates.

Unit Rates for commodity installation are below expectations resulting in reduced cost performance. Performance Improvement Plans are being developed to improve communications and efficiency throughout engineering, procurement and construction.

Weld quality issues with the C5V Supply and Exhaust Header supports (i.e., saddles) required temporary repositioning of the 60" Exhaust header in the filter cave to support repair and re-examination. However, the project remains on schedule with no impact to the HLW critical path.

### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

#### River Protection 01-D-16D - High-Level Waste Facility

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$7,653	\$8,413	\$8,615	1.10	0.98	\$7,653	\$8,413	\$8,615	1.10	0.98
Nov 2010	\$10,239	\$10,032	\$10,434	0.98	0.96	\$17,892	\$18,445	\$19,049	1.03	0.97
Dec 2010	\$14,364	\$13,384	\$13,697	0.93	0.98	\$32,256	\$31,829	\$32,746	0.99	0.97
Jan 2011	\$11,360	\$10,767	\$10,461	0.95	1.03	\$43,616	\$42,596	\$43,207	0.98	0.99
Feb 2011	\$12,550	\$12,224	\$12,651	0.97	0.97	\$56,166	\$54,820	\$55,858	0.98	0.98
Mar 2011	\$9,376	\$9,860	\$11,369	1.05	0.87	\$65,542	\$64,680	\$67,227	0.99	0.96
Apr 2011	\$11,756					\$77,298				
May 2011	\$12,848					\$90,146				
Jun 2011	\$12,220					\$102,366				
Jul 2011	\$12,471					\$114,836				
Aug 2011	\$13,392					\$128,228				
Sep 2011	\$15,817					\$144,045				
PTD	\$759,962	\$763,904	\$756,353	1.01	1.01					



## **Low-Activity Waste (LAW) Facility**

**D-00A-07, LAW Facility Construction Substantially Complete**, Due: 12/31/2014, Status: On Schedule

**D-00A-08, Start LAW Facility Cold Commissioning**, Due: 12/31/2018, Status: On Schedule

**D-00A-09, LAW Facility Hot Commissioning Complete**, Due: 12/31/2019, Status: On Schedule

### **Significant Past Accomplishments:**

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 65%, engineering is 90% complete, procurement is 82% complete, and construction is 62% complete.

LAW secondary offgas treatment systems component procurement activities continued. Vendor activities are progressing as scheduled for all offgas system components with the exception of the carbon bed adsorber (see "issues" below). Other procurement activities included issuance of a material requisition for the purchase of jet-pump-pair mixers for the LAW feed preparation vessels and the release for shipment of a container decontamination refrigeration unit.

BNI completed installation of all the cooling panels in the pour caves that are essential to maintaining safe operating temperatures. Installation was completed also on the personnel elevator, the pour cave steel thresholds, the conduit in the LAW switchgear building, and an air handling unit on the top floor of the facility. Thermite welding of rails in the North finishing line continued, as well as installation of the ASX auto-sampling system, fire alarm system, Low-Voltage Electrical (LVE) system equipment, cask handling area door electrical components, container finishing line hoists, and stairs over the roof pipe rack. Other normal activities continued, including installation of piping for the Non-Radioactive Liquid Waste Disposal (NLD), Radioactive Liquid Waste Disposal (RLD), and plant cooling water systems within the LAW, as well as installation of cable tray, conduit and wiring, instrument enclosures, lighting fixtures, partition wall framing, gypsum wallboard, and coatings.

Integrated Control Network (ICN) development for LAW systems continued with software reviews related to the primary offgas process and container export handling systems. The radioactive liquid waste disposal system control software was accepted. Commissioning Operations personnel are working with BNI Engineering to resolve carbon bed adsorber guard bed life and media replacement safety concerns.

### **Significant Planned Actions in the Next Six Months:**

- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)
- Complete installation of container handling line shield doors

### **Issues:**

Carbon Bed Adsorber fabrication difficulties have been encountered related to welding warpage. Additional Bechtel personnel have been deployed to the vendor facility including welding engineers to resolve the issue and maintain the current ship date of November 2011. Revision of



assembly techniques and attention to all aspects of quality control are in place to help ensure success and preserve the schedule.

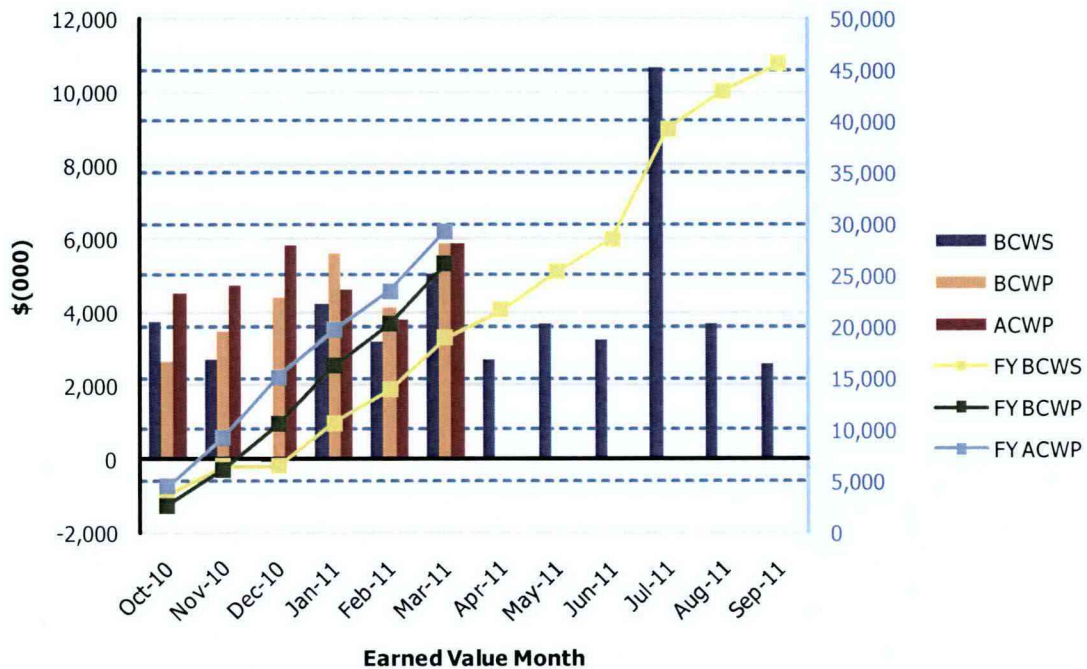
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

#### River Protection 01-D-16A - Low-Activity Waste Facility

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$3,743	\$2,654	\$4,511	0.71	0.59	\$3,743	\$2,654	\$4,511	0.71	0.59
Nov 2010	\$2,732	\$3,462	\$4,752	1.27	0.73	\$6,475	\$6,116	\$9,263	0.94	0.66
Dec 2010	(\$84)	\$4,424	\$5,823	-52.67	0.76	\$6,391	\$10,540	\$15,086	1.65	0.70
Jan 2011	\$4,232	\$5,597	\$4,606	1.32	1.22	\$10,623	\$16,137	\$19,692	1.52	0.82
Feb 2011	\$3,222	\$4,153	\$3,778	1.29	1.10	\$13,845	\$20,290	\$23,470	1.47	0.86
Mar 2011	\$5,054	\$5,862	\$5,857	1.16	1.00	\$18,899	\$26,152	\$29,327	1.38	0.89
Apr 2011	\$2,725					\$21,624				
May 2011	\$3,698					\$25,321				
Jun 2011	\$3,260					\$28,581				
Jul 2011	\$10,689					\$39,271				
Aug 2011	\$3,690					\$42,960				
Sep 2011	\$2,610					\$45,570				
PTD	\$607,369	\$607,090	\$652,423	1.00	0.93					

## **Analytical Laboratory**

**D-00A-05, LAB Construction Substantially Complete, Due: 12/31/2012, Status: On Schedule**

### **Significant Past Accomplishments:**

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, engineering is 80% complete, procurement is 74% complete, and construction is 65% complete.

On-going construction work includes: the installation of piping in the C2V/C3V system pits, autosampler equipment above the hot cells, trolleys in the hot cells, bulk piping/hanger installation, and conduit in various planning areas. Construction completed installation of the grout covers in the area of the hot cells.

Engineering completed scoping of 15 medium-voltage electrical drawings, all mechanical handling, "M7", drawings for in-cell handling and radioactive solid waste handling, and system block diagram, "J1", drawings for all lab systems. Material requisitions for jet-pump-pair fluidic devices were issued.

As construction and engineering continue commissioning personnel are diligently working on procedure development for caustic and/or oxidative leach during the batch processing of the feed slurry, as well incorporating comments to the Waste Acceptance Criteria Data Quality Objective Report. The operations team is inquiring about the date the LAB will have its environmental permits to allow for methods validation. The operations staff accepted proposed vendor cost savings measures to replace drawer slides and counter top fixtures, other suggestions were either denied or referred to the design authority.

### **Significant Planned Actions in the Next Six Months:**

- Install fume hoods (Forecast July 2011)
- Install LAB waste drum bogie transfer port (Forecast June 2011)
- Install Autosampler HEPA filter housings (Forecast June 2011)
- Install hot cell monorail airlocks (Forecast August 2011)
- Complete installation of Autosampler System (Milestone date of October 2011)

### **Issues:**

No major issues.



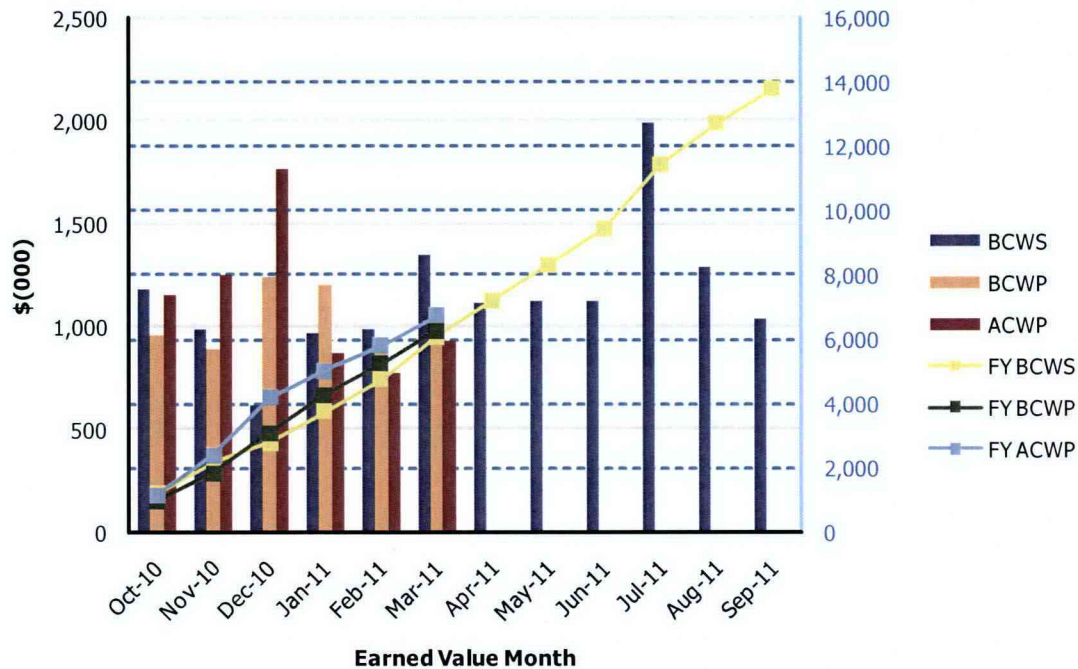
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

<b>River Protection</b> <b>01-D-16B - Analytical Laboratory</b>
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Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,180	\$954	\$1,152	0.81	0.83	\$1,180	\$954	\$1,152	0.81	0.83
Nov 2010	\$984	\$893	\$1,245	0.91	0.72	\$2,164	\$1,847	\$2,397	0.85	0.77
Dec 2010	\$621	\$1,236	\$1,768	1.99	0.70	\$2,785	\$3,083	\$4,165	1.11	0.74
Jan 2011	\$971	\$1,198	\$869	1.23	1.38	\$3,756	\$4,281	\$5,034	1.14	0.85
Feb 2011	\$982	\$949	\$770	0.97	1.23	\$4,738	\$5,230	\$5,804	1.10	0.90
Mar 2011	\$1,350	\$1,039	\$924	0.77	1.12	\$6,088	\$6,269	\$6,728	1.03	0.93
Apr 2011	\$1,116					\$7,204				
May 2011	\$1,128					\$8,332				
Jun 2011	\$1,125					\$9,456				
Jul 2011	\$1,986					\$11,442				
Aug 2011	\$1,289					\$12,730				
Sep 2011	\$1,038					\$13,768				
PTD	\$159,302	\$158,655	\$171,407	1.00	0.93					

## **Balance of Facilities (BOF)**

**D-00A-12, Steam Plant Construction Complete, Due: 12/31/2012, Status: On Schedule**

### **Significant Past Accomplishments:**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 46%, engineering is 77% complete, procurement is 46% complete, and construction is 60% complete.

Construction of BOF is progressing, and systems are being completed as demonstrated by the completion of the water treatment facility. Progress continues in the areas of plant service air for the glass former facility, fire detection equipment for the T-52 building, and cable, electrical terminations, and pressure safety valve instrumentation for the plant cooling water system in the chiller compressor plant.

The operations staff continues to evaluate facilities as they are constructed and turned over, and proposed a field change to add low point drains to the domestic water system, and concerns with the fact that the glass former facility does not have a redundant air dryer. They are also actively involved in evaluating the requirements of the emergency turbine generators.

### **Significant Planned Actions in the Next Six Months:**

- Complete construction of cooling tower (Forecast June 2011)
- Complete construction of fuel oil pumphouse (Forecast August 2011)
- Substantially complete construction of main switchgear building (Forecast June 2011)
- Complete construction of BOF switchgear building (Forecast July 2011)
- Install structural steel for anhydrous ammonia facility (Forecast August 2011)
- Emergency turbine generator supplier selection and notice to proceed (Forecast July 2011)
- Award hi-purity gas subcontract (Forecast May 2011)

### **Issues:**

- Welding of anhydrous ammonia vessel
- Evaluation, selection, and procurement of emergency turbine generator



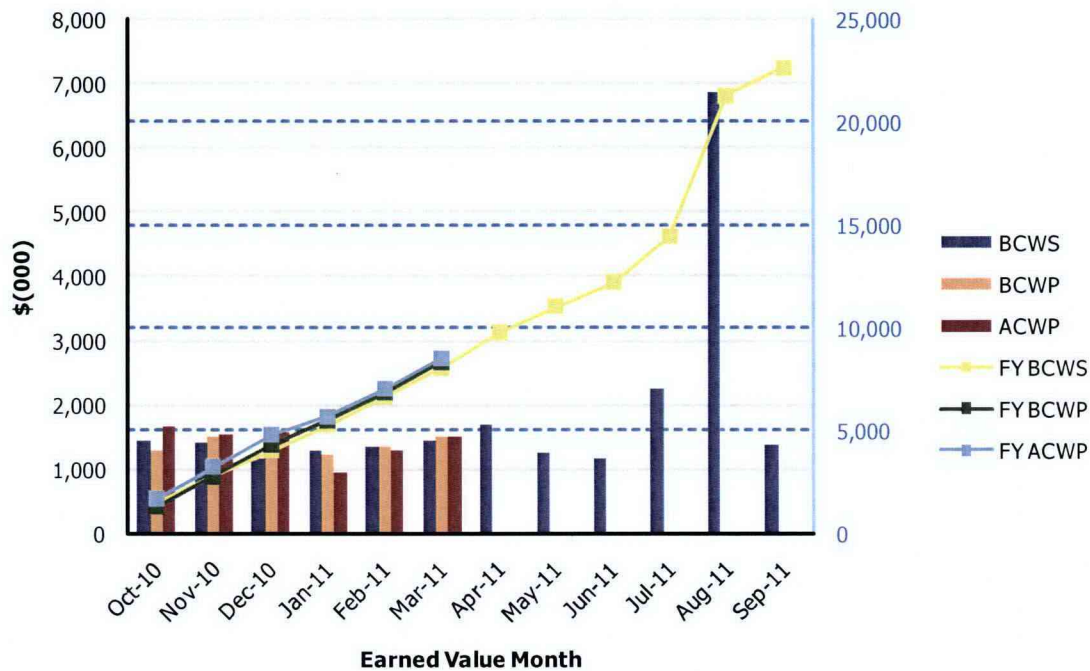
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2011 Earned Value Data

Data as of: March 2011

<b>River Protection</b> <b>01-D-16C - Balance of Facilities</b>
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Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,428	\$1,272	\$1,660	0.89	0.77	\$1,428	\$1,272	\$1,660	0.89	0.77
Nov 2010	\$1,398	\$1,520	\$1,539	1.09	0.99	\$2,826	\$2,792	\$3,199	0.99	0.87
Dec 2010	\$1,150	\$1,475	\$1,558	1.28	0.95	\$3,976	\$4,267	\$4,757	1.07	0.90
Jan 2011	\$1,302	\$1,224	\$960	0.94	1.28	\$5,278	\$5,491	\$5,717	1.04	0.96
Feb 2011	\$1,347	\$1,346	\$1,288	1.00	1.05	\$6,625	\$6,837	\$7,005	1.03	0.98
Mar 2011	\$1,429	\$1,518	\$1,505	1.06	1.01	\$8,054	\$8,355	\$8,510	1.04	0.98
Apr 2011	\$1,698					\$9,752				
May 2011	\$1,264					\$11,017				
Jun 2011	\$1,168					\$12,185				
Jul 2011	\$2,239					\$14,424				
Aug 2011	\$6,854					\$21,278				
Sep 2011	\$1,384					\$22,661				
PTD	\$243,248	\$242,721	\$240,425	1.00	1.01					

## Through March 2011

1

Note: Starting with the June 2009 report, facility Construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase I of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete.

May 2011